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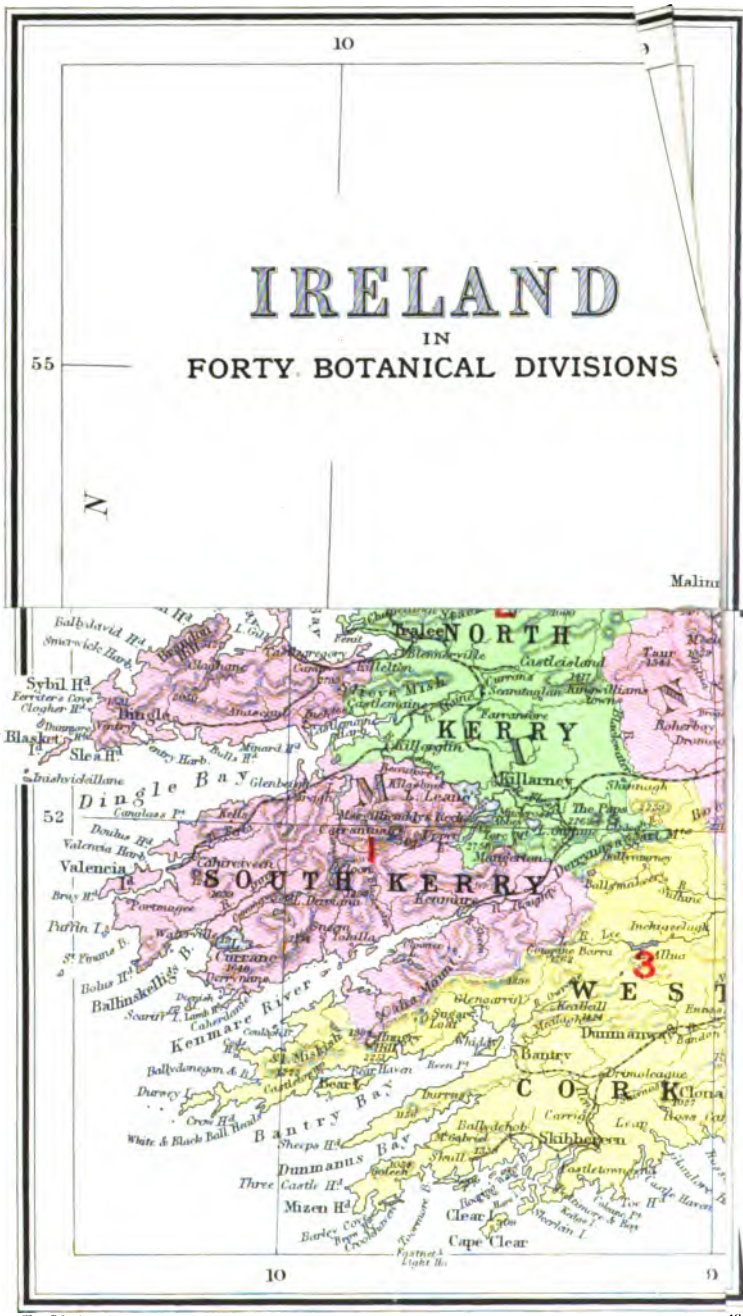

The Edinburgh Geographical Institute

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BY WILLIAMS & NORGATE,

LONDON: 14, HENRIETTA-STREET, COVENT GARDEN.

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Price—Ten Shillings and Sixpence net.

PREFACE

The need of an Irish "Topographical Botany" was forcibly brought to my mind in 1895, when perusing a copy of the ninth edition of the "London Catalogue of British Plants," sent me by the editor, Mr. F. J. Hanbury, F.L.S., on noticing that Ireland was still necessarily excluded in the census-numbers appended to the species, owing to absence of detailed information concerning the distribution of plants in this island. In the "London Catalogue," in fact, Ireland was placed on the same footing as the Channel Islands, its very existence being recognized only when a plant occurred in Ireland, but not in Great Britain. To assist in remedying this unsatisfactory state of affairs, if nothing more, I set about collecting information respecting the county-distribution of plants in Ireland.

In Great Britain, Hewett Cottrell Watson had laid the foundations of a detailed knowledge of plant-distribution in 1873–74, by the publication of his "Topographical Botany." The second edition of this work, edited by Mr. J. G. Baker and Rev. W. W. Newbould, and published in 1883, showed great progress in the mapping of the range of each species. My first idea as regards Ireland was to follow Watson's book in detail as well as in general conception, and to aim merely at quoting one reliable authority for the occurrence of any plant in any county-division. The desirability soon appeared of giving, in place of a bare authority, a definite locality, date, and author for each county record, and

this remained my object until the field-work was well advanced. It then became evident that the information which was accumulating would justify a further extension of the scheme, and would frequently allow of an attempt to intimate, in the briefest possible terms, the distribution or frequency of each species in each division. Thus the aggregate records for the county-divisions, prefaced by the description of the divisions in the Introduction, may be said to form forty exceedingly condensed county Floras.

This work may fairly be described as a companion to "Cybele Hibernica." Its aim is to supply detailed information of such a kind, and in such a form, as lay outside the scope of that book. It was the publication of the second edition of "Cybele Hibernica" that made "Irish Topographical Botany" a possibility. In the absence of the immense amount of critical sifting, of sweeping away of errors, and settling of innumerable doubtful points, which the editors of "Cybele" accomplished, it would not have been possible to have produced the present work, at least single-handed, and in a period of five years. Furthermore, the publication of "Cybele" allowed the present work to be largely curtailed, and to include, so far as was consistent with its scheme and purpose, only additional matter; the reader being referred to "Cybele" for information which it would have required further time to acquire, and further space to publish.

Neither could "Irish Topographical Botany" have been brought to its present state of completeness without the generous assistance which I have received from many fellow-botanists. The value of their contributions will appear from the notes on "The Field-work" in the Introduction, and from the body of the book. The publication of the records with which they have supplied me is in many cases the only acknowledgment I can make. The valuable lists compiled specially for the purposes of the present work by Prof. J. W. Carr, M.A., F.L.S.; Nathaniel Colgan, M.R.I.A.; Miss M. C. Knowles; Mrs. Leebody; Rev. E. S. Marshall, M.A., F.L.S.;

R. A. Phillips; Dr. R. W. Scully, F.L.S.; A. Somerville, B.SC.; and Rev. C. H. Waddell, B.D., demand a particular acknowledgment. Willing assistance was rendered by G. E. H. Barrett-Hamilton, B.A., F.Z.S.; Rev. Canon C. F. D'Arcy; Hon. R. E. Dillon, D.L.; Rev. W. W. Flemyng, M.A.; G. Fogerty, M.D.; W. A. Fogerty, M.D.; J. Ernest Grubb; Miss S. Grubb; H. C. Hart, B.A., F.L.S.; Rev. Canon T. Hartley, M.A.; Miss Isabel Horne; Prof. T. Johnson, D.SC., F.L.S.; Mrs. Frank Joyce; W. F. de V. Kane, D.L., M.A.; Rev. Canon H. W. Lett, M.A.; D. McArdle; C. B. Moffat, B.A.; F. W. Moore, F.L.S.; Joseph Neale; W. F. Nicholson; R. D. O'Brien; P. B. O'Kelly; Mrs. D. D. Persse; Miss Rosa Smith; S. A. Stewart, F.B.S.E.; E. A. Stone; Mrs. Allan Swan; W. N. Tetley, B.A.; C. Waterfall; W. West, B.A.; Prof. E. P. Wright, M.D., F.L.S.

To Mr. W. P. Coyne, M.A., of the Department of Agriculture and Technical Instruction, I am indebted for unpublished statistics relating to agriculture and the present condition of the surface of the country; and to Prof. Grenville Cole, F.G.S., M.R.I.A., and to Mr. H. J. Seymour, F.G.S. of H. M. Geological Survey, for suggestions and assistance in the preparation of a petrographical map of Ireland. For welcome aid rendered in the later stages of the work, I desire to thank Miss Constance Adams; Mr. R. A. Phillips; and Miss Christiana Vance, B.A.

Thanks are also due to many English correspondents, who rendered special service in the unravelling of critical genera. Mr. Arthur Bennett, F.L.S., passed through his hands many hundreds of specimens of Pondweeds, Sedges and miscellanea, collected in all parts of Ireland. Messrs. H. and J. Groves, F.L.S.; Mr. F. J. Hanbury, F.L.S.; Rev. E. F. Linton, M.A., F.L.S.; Rev. E. S. Marshall, M.A., F.L.S.; Rev. W. M. Rogers, M.A., F.L.S.; and Mr. Frederick Townsend, M.A., F.L.S., freely lent their aid in other critical groups. My thanks are tendered also to the Royal Irish Academy for a generous grant towards the expenses of the last year's field-work.

Being in its nature in great measure supplementary to "Cybele," the convenience was clear of keeping this work in harmony with the other, as regards arrangement and nomenclature. This principle has been followed in several important points, and has, indeed, often been allowed to over-ride any personal ideas of the compiler's on the subjects in question. Thus, the arrangement of genera and species in the two books will be found to be practically identical, with the exception that a few of the "excluded" plants of "Cybele" are inserted, each in its systematic position, distinguished by the usual marks. The omission of varieties and hybrids furnishes another exception. In all but a few cases, our knowledge of the distribution of these in Ireland is not yet sufficiently complete to make a minute analysis of any service. "Cybele" supplies most of the information which is available concerning them, and what more has accumulated will be published separately. In the matter of nomenclature, also, the convenience of uniformity in the two books has been fully recognised, and, while the specific or other value allowed to certain plants may be found to vary, the names used are in all cases identical.

The distribution recorded for many plants is still clearly incomplete, and on this account it may be thought that publication is premature. To this I can only reply that I have conscientiously endeavoured to gather together all available information, published and unpublished; and, furthermore, that five summers of steady field-work was the most that I could afford to devote to the subject. The chance of the remaining blanks in the distribution-lists being filled up is much increased by their being herein pilloried and exposed to public notice; and, indeed, the definite task of seeking out known desiderata may appeal to many to whom the indefinite and laborious work of compiling long lists of species, on the chance of some of the records proving of service, possessed but little attraction. Thus, the very incompleteness of the work may justify its publication.

Being thus incomplete, care has been taken to arrange the information respecting the distribution of species in such a form that the present state of knowledge regarding each will be evident from the context, and so that it can be added to and completed; and it is to be hoped that when the more conspicuous hiatuses have been filled up, we shall have sufficient material for a scientific exposition of Irish phyto-geography. With a view to facilitate such studies, the present essay is accompanied by maps dealing with those physical conditions of the country—petrography and orography—which most effect plant-distribution within the area. When supplemented by meteorological maps of Ireland, such as may be found in Messrs. Bartholomew's "Physical Atlas," we have displayed the main factors which influence the flora of the island. It may be pointed out, however, that at present, when comparing the vegetation of one portion of the country with another, or studying the range of any species, the facts shown on map IV., respecting the relative state of our knowledge of the flora of the different parts of the country, must be steadily borne in mind.

On two points I wish to lay particular emphasis. Firstly, the body of the work cannot be understood without a knowledge of the explanatory portion of the Introduction; and secondly, "Irish Topographical Botany" should not be used without reference to "Cybele Hibernica," if the user wishes to possess all the information which is at present available with regard to the distribution of any plant in Ireland.

R. Ll. P.

National Library of Ireland,

Dublin, *May*, 1901.

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ERRATUM.

P. 82, line 3, *for* 5 Cork E. *read* 4 Cork Mid.

INTRODUCTION

As the most westerly portion of the continent of Europe, as it exists at present, Ireland possesses a peculiar interest to the student of botanical geography. This interest is heightened when we find, in the flora of Ireland, living evidence of changes in the distribution of sea and land—changes of great magnitude, involving the whole western edge of the continental plateau, and of considerable geological antiquity. The range in Ireland of the plants referred to furnishes important testimony regarding the nature and extent of these changes. Furthermore, the distribution not only of these, but of other component groups in the Irish flora, is very suggestive when considered in connexion with the present conditions of situation, soil, and climate, under which they grow. An exact knowledge of the range of each species in the country is therefore for many reasons desirable; and the present work is an attempt at a detailed account of Irish plant-distribution, on the lines of Watson's "Topographical Botany," so far as rendered possible by the materials available.

Let us, first of all, endeavour to obtain a clear general idea of the position and physical characters of the island with which we have to deal.

I. PHYSICAL DESCRIPTION OF IRELAND.

Size and Position.—Ireland is roughly elliptical in outline, the longer axis (about NNE. and SSW.) measuring about 300 miles, the shorter (about WNW. and ESE.) about 185 miles; its area is 32,524 square miles. The island extends from latitude 51° 26′ N., to 55° 23′ N., and from longitude 5° 26′ W. to 10° 29′ W. On the north, west, and south, Ireland is fully exposed to the Atlantic Ocean, and these coasts have suffered much greater marine denudation, and are also bolder and more irregular, than the eastern shore-line. A channel, which varies in width from 13½ to 150

miles, and in depth, in the centre, from 45 to 150 fathoms, separates Ireland from Great Britain. The narrowest points are in the north-east between Antrim and Kintire (13½ miles) and between Down and Wigton (23½ miles), and in the south-east, between Wexford and South Wales (47 miles). Great Britain is, in its turn, separated from the continent of Europe by the Straits of Dover (20 miles), to the north of which is the shallow North Sea, and to the west the deeper English Channel.

Surface.—The most noticeable surface-features of Ireland are a number of more or less detached mountain-groups formed chiefly of Palæozoic rocks, of elevations varying from 1500 to a little over 3000 feet, disposed mainly around the coast, and a great central plain of slightly undulating Carboniferous limestone, raised only a couple of hundred feet above sea-level, and broken occasionally by low hill-ranges, formed generally by simple folding. Ireland is, for its size, the flattest island in the world. Lakes are numerous, but irregularly distributed; the proportion of water to the whole area is no less than one to thirty-three. More remarkable is the great extent of surface which is covered by peat bogs. In spite of the continual cutting of turf for fuel, the proportion of low-level bog to the whole area is at the present time 1 to 17. In the province of Connaught one-eighth of the entire surface is officially returned as peat bog.

The present condition of the surface of the country is shown by the following figures[1]:—

Crops, ...	22·8	per cent.
Grass, ...	52·1	,,
Woods, ...	1·5	,,
Turf Bog, ...	5·9	,,
Marsh, ...	1·9	,,
Mountain, ...	11·1	,,
Water, roads, and fences,	4·7	,,
	100·0	

Climate.—The effect of the insular position of Ireland on its climate is marked. Extremes of temperature are obviated by the uniform thermal condition of the surrounding ocean; a feature

[1] Parliamentary Return for 1899 (the latest issued).

which is enhanced by the fact that the prevailing winds are westerly and south-westerly. The genial effects of the ocean and the ocean winds are most evident during the winter months. The winter isotherms of Europe bend sharply north-westward as they leave the continent; Kerry has the same average temperature in December as Bordeaux and Rome. The reverse applies to summer temperatures, when the cooling effect of the Atlantic is so great that in July, Sligo is no warmer than Archangel. On the other hand, the bitter easterly winds of spring which prevail in the northern portions of the adjoining continent, and which are so keenly felt on the east coast of Great Britain, reach Ireland mitigated and softened, and have no appreciable effect on the flora. While along the west coast of Ireland one has frequently to travel some miles inland before even a shrub puts in an appearance, and while all over the island the effect of the westerly winds may be seen in the bending of the trees to the eastward, no such result is noticeable as the effect of easterly winds, and in certain spots on the east coast trees rise on the very edge of the sea.

The westerly winds strike the shores of Ireland heavily laden with moisture, which is precipitated, especially in the mountainous regions. A rainfall of from 70 to 90 inches is recorded from certain wet spots among the Kerry and Galway mountains. The average rainfall of the west coast, though considerably less than these figures, is still very high; the precipitation decreases as we pass eastward, and on the shores of the Irish Sea is no higher than on the low grounds of western England. Roughly speaking, the rainfall west of the Shannon averages 40 to 60 inches, and east of the Shannon 30 to 40 inches; the mountain groups of both these areas having a rainfall which exceeds the above figures.

Rocks and Soils.—Ireland is formed mainly of Palæozoic rocks. The great projecting buttresses of the coast—the savage shores of Donegal, West Mayo, and West Galway, and the cliff-walls of North Mayo, Clare, and Waterford, are formed of ancient slates and sandstones, quartzites and gneisses, and igneous rocks, of age varying from Cambrian to Carboniferous. The splendid mountain-promontories of Kerry and West Cork consist of slates and conglomerates laid down in Devonian times, now folded into grand simple arches and troughs. The high north-eastern corner of Ireland, with its

down in "Cybele Hibernica" as in round numbers 1000 species and sub-species of native and fully naturalized plants, as against 1420 in England and Wales or 1480 in Great Britain. Reckoned on the standard of the "London Catalogue," 9th edition (1895), this 1000 species would be increased to about 1160; and intermediate figures may be arrived at, according to the degree of "lumping" or "splitting" awarded to certain notorious genera, and also to the interpretation of the term "fully naturalized." As enumerated in the following pages, the flora of Ireland numbers 1019 species, or 1138 species and sub-species; the former figure being arrived at by grouping the plants printed in italics in the body of the work under their natural aggregates.

Watson's Types.—The division of the Irish flora into the various types of Watson's "Cybele Britannica," and the comparison of the groups thus formed with the similar groups in the sister island, are matters which are so fully dealt with in "Cybele Hibernica" that they need not be rehearsed here; the three years which have elapsed have brought forth nothing to materially affect the statistics there given, or the deductions drawn from those statistics. The following table, taken from "Cybele" (p. xlii), will remind the reader of the features which such a comparison brings forth:—

Type.*	Number in England and Wales.	Number in Ireland.
British,	544	536 or 98 per cent.
English,	381	246 or 64·5 ,, ,,
Scottish and Intermediate,	98	62 or 63·3 ,, ,,
Highland,	67	41 or 61·2 ,, ,,
Atlantic,	62	34 or 55·0 ,, ,,
Germanic,	102	12 or 11·7 ,, ,,

* The Types "may be briefly defined thus:—

1. British Type—species widely spread through S.M.N. Britain.
2. English Type—species chiefly seen in S. or S.M. Britain.
3. Scottish Type—species chiefly seen in N. or in N.M. Britain.
   Intermediate Type—species chiefly seen in Mid. Britain.
4. Highland Type—species chiefly seen about the mountains.
5. Germanic Type—species chiefly seen in East England.
6. Atlantic Type—species chiefly seen in West England.
   Local species, restricted to single or few provinces."
   —WATSON: "Compendium to the Cybele Britannica," p. 23. 1870.

It will be seen that the most striking point is the poverty, in the Irish flora, of Germanic type plants. This is quite to be expected, when we remember that the plants of this type are those which, in the sister island, are grouped along the eastern shores, fronting the German Ocean, where soil, climate, and proximity to the Continent no doubt affect, or have affected, their present distribution. Ireland has her due proportion, or nearly so, of the other types, excepting the British type. This, consisting as it does of plants of universal or very wide distribution in Great Britain, is represented in Ireland by 98 per cent. of the British list.

Topographical Groups.

The South and West Coasts.—The subject of topographical groups in the Irish flora, and of natural botanical provinces, must be reviewed in a less cursory manner. The most remarkable feature in the botany of the island, and one which gives it a special interest to students of plant-distribution, is the occurrence, in the southern and western counties, of a number of plants which have their headquarters in the Pyrenees, or along the Mediterranean shores, and which reach in Ireland a latitude higher than that which marks the limit of their range on the Continent. A few of them are also found in the south-west of England. Commingling with these plants, we find a small group of species of widely different origin—a boreal, almost sub-Arctic group, made up of plants whose home is in the northern United States and in Canada. Also, owing no doubt to the same climatic conditions which allow of the continued existence of these northern species at such low latitudes, a number of plants characteristic of alpine situations, or of higher latitudes in Great Britain, descend from their usual boreal or mountain haunts, and flourish on the warm western coast, often in abundance, right down to sea-level. The range in Ireland of these three remarkable groups —the southern plants, North American plants, and low-level alpines —is in general well defined. With Kerry, Clare, or Connemara as centres, they spread, with few exceptions, along a comparatively narrow strip of country up and down the west coast, the most widely-distributed ranging northward to Donegal, and south-eastward to Waterford.

DISTRIBUTION ALONG THE WEST COAST OF CHARACTERISTIC WESTERN PLANTS.

Characteristic West of Ireland plants.	Waterford, Cork, Kerry. *Non-calcareous.*						Clare and E. Galway. *Calcareous.*			W. Galway and W. Mayo. *Non-calc.*		Sligo, Leitrim, and E. Donegal. *Calcareous.*			Donegal. *Non-calc.*	
	Waterford.	Cork E.	Cork Mid.	Cork W.	Kerry S.	Kerry N.	Clare.	Galway SE.	Galway NE.	Galway W.	Mayo W.	Sligo.	Leitrim.	Donegal E.	Donegal W.	Donegal E.
	6	5	4	3	1	2	9	15	17	16	27	28	29	34	35	34
SOUTHERN PLANTS—																
Cantabrian Group—																
Saxifraga umbrosa,[1]	—	.	—	▬	▬	—	.	.	.	▬	▬	.	.	.	—	—
Saxifraga Geum,	.	.	.	—	▬	—	.	.	.	.	.	.	.	.	.	.
Arbutus Unedo,	.	.	.	—	▬	—	.	.	.	.	.	.	.	.	.	.
Pinguicula grandiflora,	.	—	▬	▬	▬	▬	.	.	.	.	.	.	.	.	.	.
Erica mediterranea,	.	.	.	.	.	.	.	.	.	—	▬	.	.	.	.	.
Erica Mackaii,	.	.	.	.	.	.	.	.	.	—	.	.	.	.	.	.
Dabeocia polifolia,[2]	.	.	.	.	.	.	.	.	.	▬	▬	.	.	.	.	.
Local-Atlantic type—																
Euphorbia hiberna,[3]	—	▬	▬	▬	▬	▬	.	—	.	.	—	.	.	.	—	—
Atlantic type—																
Carum verticillatum,[4]	.	.	.	—	▬	—	.	.	.	.	.	.	.	.	—	.
Sibthorpia europæa,	.	.	.	.	—	—	.	.	.	.	.	.	.	.	.	.
Bartsia viscosa,	—	—	—	▬	▬	▬	.	.	.	.	.	.	.	.	.	—

Habenaria intacta,			—	—	—												
AMERICAN PLANTS—																	
Spiranthes Romanzoffiana,[7]							—	—	—	—							
† Sisyrinchium angustifolium,				—													
† Juncus tenuis,				—	—	—	—	—									
Naias flexilis,				—	—	—	—										
Eriocaulon septangulare,				—	—		—		—	—	—				—		
ALPINE AND NORTHERN PLANTS—																	
Alpine type—																	
Draba incana,[8]					—					—	—	—	—	—	—	—	
Dryas octopetala,[9]							—	—	—	—		—	—		—		
Sesleria cærulea,[10]							—	—	—	—	—	—	—	—	—		
Scottish type—																	
Potentilla fruticosa,[11]							—		—	—							
Galium sylvestre,						—	—	—	—			—	—				
Gentiana verna,[12]							—	—	—	—							
Euphrasia Salisburgensis,[13]							—	—	—				—				

[1] Extends into 7 Tipperary S. Never on limestone. [2] Extends into 26 Mayo E. [3] Also in 8 Limerick, sparingly. [4] Also in 39 Antrim, and 40 Derry. [5] Also in 8, 10, (20 extinct), 33, 36. [6] Extends into 26 Mayo E. [7] Also in 37 Armagh, and 40 Derry; very rare. [8] Also in 40 Derry. [9] Also in 33 Fermanagh. [10] Extends into 10, 23, 26, 33. On limestone only. [11] Extends into 26 Mayo E. On limestone only. [12] Extends into 26 Mayo E. [13] Also in 8 Limerick and 26 Mayo E. On limestone only.

The foregoing table will convey a general idea of the distribution of the more prominent members of these groups. With one or two exceptions, which are stated, the plants are confined to those county-divisions which border on the Atlantic. It is to be noted that the Atlantic seaboard of Ireland naturally divides itself into five geological districts, characterised alternately by a marked prevalence or absence of limestone. Many of the plants of the groups under consideration are distinctly calcicole or calcifuge (lime-loving or lime-avoiding), and it will be seen from the table that their distribution is profoundly affected by the petrological conditions which prevail. An attempt is made to show the head-quarters of each species by the use of a heavier or lighter line according to its abundance or rarity in each division. The divisions are enumerated in the order in which they lie along the coast. East Donegal is entered twice, as it forms the coast-line of two widely separated areas.

Though the Cantabrian and American plant-groups are members of widely separated floras, a stronger reason exists for considering them together than the fact of their similar distribution in Ireland. There can be little doubt that both arrived in the island, one from the south, the other from the north, over land-surfaces long since destroyed, and that with the alpine group they represent the very oldest components of our existing flora. What the period was when these land-connexions existed has not yet been determined with any degree of certainty; but that it was pre-Glacial appears an almost necessary admission, despite the difficulty of accounting for the survival of the southern plants throughout the "Great Ice Age."

The Central Plain.—The great Limestone Plain, which next demands consideration, stretches uninterruptedly from Dublin Bay on the east coast to Galway Bay on the Atlantic. So little has been written on its characteristics, physical or botanical, that a brief description appears desirable here. The Central Plain of Ireland is the largest tract of Carboniferous limestone in Western Europe. It may be considered as a wide flat syncline, its axis parallel to the main NE. and SW. folding of the island. On the north, the plain terminates against the flanks of the limestone highlands of Cavan, Leitrim, and Sligo. In the south, its con-

tinuity is first broken by the Old Red Sandstone ridge of Slieve Bloom and Devil's Bit, an anticline that runs SW. from Mountmellick in Queen's County down into the North Tipperary highlands. But for botanical purposes the Central Plain may be considered as lapping round these hills, and stretching southward to the Suir, where it abuts on the great mountain-wall of the Galtees and Comeraghs. The average elevation of the plain is not more than two hundred feet above sea-level. The Grand Canal, which crosses from the east coast at Dublin, to the Shannon, attains its summit level at 279 feet in Kildare. The Royal Canal, with a rather more northerly course from Dublin, rises to 324 feet near Mullingar. Both of these summits are on the main watershed, which runs north and south about half way between the Irish Sea and the Shannon. The surface of the Central Plain is seldom absolutely flat. Low cultivated ridges and occasional knobby hills alternate with stretches of pasture and marshy meadow-land, and with the great red bogs. The absence of dominating ridges causes the river-basins to be basins in name only, and often indistinguishable in the field. This it is that makes any scheme for the subdivision of Ireland by river-basins a geographical, but in no sense a phytological one. The same feature is accountable for the singularly extensive views that meet the eye of the traveller who ascends one of the few eminences of the Central Plain. From Knock Eyon, a limestone knob on the edge of Lough Deravaragh in Westmeath, rising only 400 feet above the surrounding country, sixteen counties, or half the counties of Ireland, may be easily numbered. Conversely, insignificant hills in the Central Plain become peculiarly conspicuous. Croghan Hill in King's County, a granite volcano-stump rising 500 feet from the plain, is a notable landmark over a couple of thousand square miles around. Although the rivers are generally slow-flowing, the area liable to inundation is not extensive. Lakes are irregularly distributed; and while some counties, such as Westmeath, Roscommon, &c., have an abundant lake-flora, in others, such as King's Co., Queen's Co., Kildare, were it not for the canals, or for the rivers in Waterford and South Tipperary, difficulty would be experienced in finding enough water to harbour the common hydrophytes.

The flora of the Central Plain is essentially calcicole. The soil of the drier cultivated tracts is usually calcareous. The marshes are more so, and are underlaid with a tough grey limestone mud. The eskers are formed almost entirely of limestone débris. The bogs form a notable exception, their surface being cut off by the thick layers of peat from the limy materials on which they rest. The plants which grow in the bog-pools—even Charas, which have a peculiar faculty for collecting lime—are quite free from the incrustation which, from the botanist's point of view, so often ruins aquatic plants in limestone districts. The characteristic plants of the Central Plain are largely inhabitants of the abundant marshes and bogs. The subjoined list will exemplify the nature of the flora :—

CHARACTERISTIC PLANTS OF THE CENTRAL PLAIN.

Pastures and dry ground.

Carlina vulgaris.	E	Orchis Morio.	
Orchis pyramidalis.			

Bogs.

Drosera anglica.		Rhynchospora fusca.	W
Vaccinium Oxycoccus.	E	Rhynchospora alba.	
Andromeda Polifolia.	E	Lastrea spinulosa.	

Marshes.

Galium uliginosum.		Carex filiformis.	W
Epipactis palustris.		Carex paludosa.	
Juncus obtusiflorus.	W		

Ponds and ditches.

Ranunculus circinatus.		Cladium Mariscus.	W
Utricularia intermedia.	W	Chara polyacantha.	
Potamogeton plantagineus.			

In the above list, the plants marked W become more abundant in the western portion of the Central Plain ; those marked E are more frequently met with in suitable habitats in the east.

As in the west we find alpine and northern species descending to unusually low elevations, so in the Central Plain and in the north and south we may trace a tendency in the flora to the same

character. Thus, *Saxifraga Hirculus*, *Vaccinium Vitis-Idæa*, *Listera cordata*, appear on bogs at low elevations. *Selaginella selaginoides* is widely spread over the low grounds down to sea-level; lowland lakes or rivers yield *Subularia aquatica*, *Lobelia Dortmanna*, *Carex aquatilis*, *Isoetes lacustris*; and *Galium boreale* abounds on the shores of the larger lakes.

The East Coast.—The east of Ireland presents, as might be expected from its proximity to Great Britain, a flora which more nearly approaches in character the vegetation of the neighbouring part of the adjoining island. Climate and soil no doubt contribute to produce this character. The climate is drier, colder in winter, warmer in summer, and the soils lighter, than in the west of Ireland. The east coast flora differs in a broad sense from that of the west coast (1) in the absence of the characteristic plants of the west coast—*i.e.* the Cantabrian group, the American group, and the low-level alpines; and (2) in the presence of a number of plants of light soils, many of which are in the British Isles characteristically English. These light-soil plants have their Irish head-quarters in the south-east, and most of them reach their northern limit in Dublin or Louth. County Dublin forms another focus of this section of the flora. In the north-east this element hardly exists, and we find instead certain plants which have a more or less northern range in Great Britain. The table on next page shows the distribution along the east coast of some of its characteristic plants. It may be noted that except in Dublin and Meath, limestone is almost absent from the eastern sea-board.

The flora of Ireland is especially characterised by the east and west contrast of its elements. A comparison between the plants of north and south exhibits no such striking differences. If we examine the list of "Southern Plants"—*i.e.* plants not found north of lat. 52½°—given in "Cybele" (p. lv), it will be found to consist of rather heterogeneous elements—Cantabrian plants from the south-west, east coast plants which do not range north of Wexford, and critical plants the distribution of which has not yet been worked out. The "Northern Plants" list of "Cybele" (p. lvi) is more homogeneous, and is composed mainly of plants of north-east Ireland, which in Great Britain have a more or less northern distribution.

Distribution of characteristic East Coast Plants.

Name.	S.-East.			Mid-East.				N.-East.			Watsonian Type.
	Cork East.	Waterford.	Wexford.	Wicklow.	Dublin.	Meath.	Louth.	Down.	Antrim.	Derry.	
	5	6	12	20	21	22	31	38	39	40	
Trifolium scabrum,	—	.	—	▬	▬	.	.	.	.	.	English.
‡Sisymbrium Sophia,[1]	.	(–)	.	—	▬	.	.	.	(–)	.	English ?
Diotis maritima,	.	—	—	.	.	.	.	.	.	.	English ?
Asparagus officinalis,	.	—	—	.	.	.	.	.	.	.	Atlantic.
Juncus acutus,[2]	.	—	—	—	.	.	.	.	.	.	Engl.-Atlantic.
Thalictrum dunense,[3]	.	.	—	—	—	.	.	—	—	.	?
Trigonella ornithopodioides[4]	.	.	—	—	—	.	—	(–)	.	.	English.
Trifolium glomeratum,	.	.	—	—	.	.	.	.	.	.	English.
Festuca uniglumis,	.	.	▬	—	▬	—	—	.	.	.	Engl.-Atlantic.
Equisetum Moorei,	.	.	—	—	.	.	.	.	.	.	?
Saxifraga granulata,[5]	(–)	.	.	—	—	—	.	—	—	—	Brit.-Intermed.
Senecio erucifolius,[6]	.	.	.	—	▬	—	.	.	.	.	English.
Scilla verna,	.	.	.	—	▬	.	—	▬	▬	▬	Atlant.-Scott. ?
†Sisymbrium Irio,	.	.	.	.	▬	.	.	.	.	.	English-Local.
Hypericum hirsutum,[7]	.	.	.	.	▬	—	.	.	—	.	British-English.
†Epilobium roseum,[8]	.	.	.	.	—	.	—	—	—	.	English.
Atriplex farinosa,	.	.	.	.	—	—	—	▬	▬	.	British-Local.
Barbarea intermedia,[9]	.	.	.	.	.	.	.	▬	▬	▬	?
Elatine Hydropiper,[10]	.	.	.	.	.	.	.	—	.	.	English-Local.
Rosa hibernica,	.	.	.	.	.	.	.	—	—	—	Intermediate ?
Geranium pratense,	.	.	.	.	.	.	.	.	▬	.	British-English.
Geranium sylvaticum,	.	.	.	.	.	.	.	.	—	.	Scottish.
Pyrola secunda,	.	.	.	.	.	.	.	.	—	—	Scottish.
Melampyrum sylvaticum,[11]	.	.	.	.	.	.	.	.	▬	—	Scottish.

[1] Also, but only as a casual, in 8, 19, 22. [2] In 3 Cork W. also. [3] One station in 35 Donegal W. also. [4] Also in 4 Cork Mid. [5] Extends into 37 Armagh. Introduced in Cork. [6] Extends into 19 Kildare. [7] One station in 19 Kildare also. [8] Extends into 37 Armagh. [9] Extends into 37 Armagh, and has occurred in 28 Sligo. [10] Formerly extended into 37 Armagh. [11] One doubtful record for 35 Donegal W. also.

Plant-groups dependent on Soil or Moisture.

Calcicole and calcifuge Plants.—The presence or absence of lime is the most important particular in which petrology affects the distribution of plants; and in Ireland the bold grouping of the calcareous and non-calcareous rocks helps to emphasize this feature of phytogeology. It has been already pointed out that the west coast offers some striking alternations of calcicole and calcifuge plant-groups, due to geological features; also that the great expanse of limestone in the Central Plain has its due effect on the flora of that region. In very few counties, however, are the rocks and soils so uniformly calcareous or non-calcareous as to practically exclude lime-loving or lime-avoiding plants from their whole area. A knob of Old Red Sandstone, or Silurian rocks, breaking through the limestone crust of the Central Plain, immediately produces *Galium saxatile*, *Vaccinium Myrtillus*, *Rumex Acetosella*, *Deschampsia flexuosa*, and other characteristic calcifuge species. Even the bogs lying on the limestone are, as has been already mentioned, quite free from lime, and maintain a calcifuge flora. So that in the lists which follow it will be found that in the counties where the Carboniferous limestone attains its greatest development, many typical calcifuge species are present.

The converse case—the absence of calcicole species in counties poor in or devoid of limestone—is more strongly marked. For instance, a number of plants follow the Carboniferous limestone northward to its extreme limit in South Donegal and Armagh, but are absent from the rest of Ulster, or very rare therein. *Sesleria cærulea* in the west, and *Orchis pyramidalis* in the east, are good examples. A more conspicuous line of demarcation—indeed one of the most remarkable phytogeological boundaries in Ireland—is seen where the Central Plain limestones lie up against the ancient metamorphic highlands of Connaught, on the west side of Loughs Corrib and Mask. Here, as we pass off the limestone, *Habenaria intacta*, *Gentiana verna*, *Sesleria*, and other interesting plants which have been our companions over many miles, give way abruptly to the equally rare *Dabeocia*, *Saxifraga umbrosa*, and plants of similar proclivities.

In districts where limestone rocks are absent, calcicole plants may find a congenial home on maritime sands of which comminuted shells form a proportion. Thus, in the north-east, *Carlina* and *Orchis pyramidalis* have their only stations (excepting one on Chalk rocks for the latter) on the sand-dunes. *Asperula cynanchica*, in Connemara and Kerry, likewise furnishes a good example.

It may be useful to give a list of a few of the more prominent lime-loving and lime-avoiding plants. In order that the groups may be the better contrasted, the names are printed in parallel columns.

CHARACTERISTIC CALCICOLE AND CALCIFUGE PLANTS.

CALCICOLE.	CALCIFUGE.
Geranium lucidum.	Cytisus scoparius.
Poterium Sanguisorba.	Ulex Gallii.
Centaurea Scabiosa.	Galium saxatile.
Carlina vulgaris.	Jasione montana.
Leontodon hispidus.	Vaccinium Myrtillus.
Chlora perfoliata.	Erica cinerea.
Gentiana Amarella.	Digitalis purpurea.
Calamintha officinalis.	Rumex Acetosella.
Origanum vulgare.	Juncus squarrosus.
Orchis pyramidalis.	Carex binervis.
Spiranthes autumnalis.	Deschampsia flexuosa.
Juncus glaucus.	Nardus stricta.
Avena pubescens.	Blechnum Spicant.
Ceterach officinarum.	Athyrium Filix-fœmina.

It is to be noted that, in our flora, calcifuge species are much greater in number than calcicole species. In other words, the number of plants which exhibit a dislike to lime considerably overtops the number of those which show a marked preference for a limy soil.

Plants of the Sea-coast.—The sea-coast flora may conveniently be divided into three groups:—

(1). Salt-marsh plants, such as *Spergularia salina*, *Apium graveolens*, *Statice rariflora*, *Atriplex portulacoides*, *Salicornia herbacea*, *Triglochin maritimum*, *Juncus Gerardi*, *Scirpus maritimus*.

(2). Plants of sea-rocks, such as *Silene maritima*, *Spergularia rupestris*, *Crithmum maritimum*, *Inula crithmoides*, *Statice occidentalis*, *Armeria maritima*, *Asplenium marinum*.

(3). Plants of the sands, such as *Glaucium flavum*, *Cakile maritima*, *Eryngium maritimum*, *Calystegia Soldanella*, *Salsola Kali*, *Euphorbia Paralias*, *Carex arenaria*, *Psamma arenaria*.

The first of these groups is both the largest and the best-marked; very few of the characteristic plants of the salt-marsh are found under other conditions; they are true halophytes. Four of the most conspicuous plants of the sea-rocks—*Silene maritima*, *Cochlearia officinalis*, *Armeria maritima*, *Plantago maritima*—reappear at high elevations on mountains. In Ireland the mountain-groups on which these grow are confined to the south, west, and north, and we seek them in vain on the highlands of Wexford, Wicklow, Louth, and Down. We have in the west, too, some interesting examples of the occurrence inland at low levels of typical sea-coast plants. *Silene maritima* and *Asplenium marinum* grow by the Killarney lakes, a few feet above the water-level (about 70 feet over the sea). *Carex extensa* grows by Lough Corrib near Oughterard; *Carex distans* has been found on Lough Erne, also at Tuam 200 feet above sea-level; and *Plantago maritima* is abundant, not only over all the low-lying limestone country around the head of Galway Bay, for many miles inland, but around Loughs Mask, Carra, Cullin, and Conn, and even on Lough Derg and about Claremorris.

As regards the third group—plants of the sands. Most of the plants of sandy *shores*, such as *Glaucium*, *Eryngium*, *Salsola*, are not, in the British Isles at least, found in other situations. The plants of the sand-dunes are not so essentially maritime; and while some, such as *Euphorbia Paralias* and *Psamma arenaria*, undoubtedly prefer the neighbourhood of the sea, others merely choose this habitat on account of their predilection for a light porous soil. Such are *Ononis arvensis*, *Echium vulgare*, *Cynoglossum officinale*, species which are not uncommon in inland situations in England, but which, on account of the rarity of light soils in Ireland, are almost confined to the coast.

The whole group of plants of sandy shores is more largely represented on the east coast than on the west. The bare wind-swept dunes of the west coast, continually changing under the influence

of Atlantic gales, harbour a poor flora compared with the more stablemoss-grown sand-hills fringing the Irish Sea.

Plants of sandy and gravelly Soils.—As stated in the last paragraph, sandy and gravelly soils are rare in Ireland, except on the sea-coast. The xerophytic flora is in consequence poor and local. In the south-east and east, chiefly on the low grounds of Wexford, Kilkenny, Carlow, Wicklow, and Dublin, the light-soil flora reaches its maximum. All over the Central Plain, the eskers alone furnish a habitat. Clinging to their winding ridges, we find *Anthriscus vulgaris*, *Erigeron acre*, *Carlina vulgaris*, *Carduus pycnocephalus*, plants which in Ireland are characteristic of the coasts. A gravel-pit in the Central Plain often contains a galaxy of gay light-soil plants not to be seen elsewhere in the neighbourhood—Poppies, *Hyoscyamus*, *Verbascum Thapsus*, *Lychnis vespertina*, *Centaurea Scabiosa*. Towards the west coast the eskers are often more clayey, and the gravel-pits less productive.

Plants of the Bogs.—The great red bogs of the Central Plain are a striking feature of Irish botanical geography. Their flora is restricted, and possesses a character of its own; and is quite distinct from the flora of the marsh. The marshes of the Central Plain are generally limy, and yield a proportion of calcicole species; on the bogs, on the contrary, no trace of lime usually exists—the *Characeæ* and Pondweeds of the bog ditches, for instance, are beautifully free from incrustation. The most characteristic plants of the Central Plain bogs are—

Drosera anglica.	Vaccinium Oxycoccus.
Andromeda Polifolia.	Rhynchospora alba.

These seldom occur in any other situation. A few additional plants have, in the Central Plain, their characteristic habitat around the drier edges of the bogs, especially where turf-cutting has assisted drainage :—

Betula verrucosa.	Osmunda regalis.
Carex Pseudo-cyperus.	Lastrea spinulosa.

I extract from my notebooks two typical lists of plants of the red bogs; each list comprises all the higher plants found within a ten-foot radius.

Bog near Killashee, Co. Longford.

Rhynchospora alba, v. c.	Drosera rotundifolia.
Calluna vulgaris, v. c.	D. anglica.
Narthecium ossifragum, v. c.	Carex glauca.
Rhynchospora fusca, c.	Andromeda Polifolia.
Erica Tetralix.	Scirpus cæspitosus.
Eriophorum angustifolium.	Lycopodium Selago.

The smoothness of the surface, and abundance of *R. alba*, were peculiar features of this bog.

Bog near Frankford, King's Co.

Calluna vulgaris.	Eriophorum angustifolium.
Scirpus cæspitosus.	Narthecium ossifragum.
Erica Tetralix.	Drosera rotundifolia.
Eriophorum vaginatum.	Rhynchospora alba.

This was a bog with a poor and stunted flora, which appeared to be dying out.

As we approach the centre of Ireland from the east, several plants, which are either very rare in, or absent from the bogs of the tract we have traversed, make their appearance—*Drosera intermedia*, *Rhynchospora fusca*, *Carex limosa*—and these, increasing westward, are characteristic of the bogs of the west coast. *Andromeda Polifolia* and *Vaccinium Oxycoccus*, on the other hand, become very rare in the west.

The black or mountain bogs possess a flora less constant than that of the red bogs, on account of the varying conditions depending on slope, water supply, and depth of deposit. In general, it may be said that the most characteristic plants of the red bogs, such as *Drosera anglica*, *Andromeda Polifolia*, *Vaccinium Oxycoccus*, and *Rhynchospora alba*, do not occur except where a level tract furnishes a habitat with a steady and copious water-supply; and in place of these, other species are found, of which *Juncus squarrosus*, *Molinia cærulea*, and in drier places *Erica cinerea*, *Carex binervis*, and *Nardus stricta*, will serve as examples.

Whereas the red bogs and their flora have usually sharply defined limits, the mountain bogs graduate by diminution of water-supply

into heath, with Bracken, Gorse, Orchids, and Cudweeds. As we ascend, likewise, their flora changes, and eventually alpine plants make their appearance.

Plants of the Marshes.—The marsh plants do not form so distinct a group as those of the bogs, since many of them likewise occur along the margins of lakes and rivers, where the conditions are similar. In the Central Plain considerable areas may be generically described as marsh, varying in character from wet meadows or wet clayey pasture to silted up lakes or deep swamps. Frequently the soil consists of a soaking sticky clay, limy and sterile, but sometimes covered with a congenial layer of vegetable mould. In such marshes, amid broad patches of *Juncus obtusiflorus* and *Phragmites communis*, *Cladium Mariscus* and *Carex filiformis* may be expected, and among the undergrowth *Epipactis palustris* and *Galium uliginosum* are characteristic; and where a few inches of water lie, *Utricularia intermedia*, *Potamogeton plantagineus*, and *Chara polyacantha* are almost sure to be found. Of the above, *Cladium*, *C. filiformis*, and *U. intermedia* increase westward, and are in no way affected by the absence of lime; the others range chiefly over the Limestone Plain.

Where marshy meadows stretch, such as the extensive "callows" along the Shannon, a more varied and attractive flora prevails, and the landscape is brightened by patches of *Thalictrum flavum*, *Lysimachia vulgaris*, *Carduus pratensis*, with abundance of Meadow-Sweet and Purple Loosestrife, and more locally *Lathyrus palustris*, *Galium boreale*, and rarer plants, amid a profusion of Orchids.

Plants of the Rivers. *The Shannon.*—The only Irish river that can be said to possess any marked peculiarities in its flora is the Shannon, which is interesting in several respects. It is the largest river in the British Isles, and 214 miles in length. From its source among the Cavan hills it descends 186 feet in ten miles to Lough Allen. There it enters the Limestone Plain, and flows southward across it for some 130 miles. Its fall in this distance is only 51 feet, and the river forms at intervals great lake-like expanses, with winding shores and numerous islets, being in places four to seven miles wide. From Killaloe, at the southern end of Lough Derg, the Shannon cuts its way out of the Central Plain through high

hills of Old Red Sandstone, and dropping 97 feet in 18 miles, reaches sea-level at Limerick, where it widens into a great estuary.

One plant of the Shannon—*Inula salicina*—is in the British Isles restricted to the shores of Lough Derg. Another, *Chara tomentosa*, is elsewhere in these islands confined to the lakes of Westmeath. A third, *Scirpus triqueter*, which inhabits the tidal waters in abundance, is to be reckoned among the rarest British plants. The most characteristic plant of the Shannon is *Teucrium Scordium*; it ranges from Roosky in Leitrim to Limerick, and is most abundant on the expansions of Ree and Derg; elsewhere in Ireland it is known only from one lake in Clare. On the rocky limestone shores of the river-lakes a rich and peculiar flora prevails; the following plants are characteristic:—

Thalictrum collinum.
Geranium sanguineum.
Rhamnus catharticus.
Rubus cæsius.
Parnassia palustris.
Galium boreale.
Carlina vulgaris.
Hieracium umbellatum.
Chlora perfoliata.
Gentiana Amarella.
Teucrium Scordium.
Juniperus communis.
Ophrys apifera.
Sesleria cærulea.
Selaginella selaginoides.

Plants of the Lakes.—The peculiar flora of the river-lakes of the Shannon has been dealt with in the preceding paragraph. Of similar character is the flora of the shores of the large western lakes—Lough Corrib, Lough Mask, and Lough Conn. These all lie along the western edge of the Central Plain, and their margins are formed chiefly of limestone rocks. When Lough Erne is reached we have passed beyond the range of several of the more conspicuous plants of the limestone lake-shores, and a less striking flora prevails.

In the north-east, Lough Neagh, the largest lake in the British Isles, offers some points of interest. Two species are in Ireland confined to its shores—*Carex Buxbaumii* and *Calamagrostis stricta*; both being exceedingly rare in Great Britain, and characteristic of northern Europe. A group of plants usually maritime in their habitat also attracts attention:—*Scirpus maritimus*, *S. Tabernæmontani*, *Spergularia rupestris*, *Viola Curtisii*, *Erodium cicutarium*, *Trifolium arvense*. The open sandy character of the shores may sufficiently account for the presence of the last three. As to the others, when

taken in conjunction with the occurrence in the lake of the shrimp *Mysis relicta*, a northern animal belonging to a genus essentially marine, and with the fact that the Common Mussel (*Mytilus edulis*) is found in a fossil state in Boulder-clay on the shores, one is tempted to look on these plants as survivals of a time when a lower level of the land, towards the close of the Glacial Epoch, caused marine conditions to prevail.

Human Influence on the Flora.

It is essential that we should bear in mind the profound influence which the operations of man have exercised on the flora of the country. Hardly a spot but bears evidence of the long human occupation of our island. It is not easy to conjecture the primeval condition of the fertile portions of the country, before tillage, grazing, and drainage began to play their part. We can conceive great woods and thickets, open park-like land, and grassy downs, but the details of the primitive vegetation we may never know. Where tillage has not reached, clearing and grazing have altered the face of the country, so that marshes and mountain-tops, glens and sand-dunes, all bear the stamp of man's interference. Only perhaps in the centre of the great bogs, on inaccessible cliffs, or in the larger lakes, do we find a flora absolutely undisturbed. In the wilder and rougher parts of the country, it is probable that the bulk of the original flora is still to be found; but it cannot be doubted that the plant-associations of the fertile grounds have been scattered to the winds. There is a difficulty in tracing the extinction of plants, which must have gone on slowly through centuries. The most conspicuous example in Ireland is the Scotch Fir, which at one time, as our bogs tell us, covered vast tracts of country, and was probably finally exterminated by the demand for fuel for smelting and domestic purposes. The destruction of arboreal vegetation by man or by grazing animals is likewise made clear in wild districts like Connemara, where not a native tree is to be seen for miles, save on islands in lakes, where the belt of water has preserved fragments of the old flora, and we find an abundant growth of Holly, Birch, Mountain-Ash, Yew, Oak, and Juniper. A recent example of plant-destruction by drainage may be studied at

Lough Neagh. About the year 1850 the level of the lake was permanently lowered by some ten feet. Since that date *Rhamnus catharticus*, *R. Frangula*, *Lathyrus palustris*, *Sium latifolium*, *Carex Buxbaumii*, *C. elongata*, *C. filiformis*, *C. paludosa*, *Lastrea Thelypteris*, *Pilularia globulifera*, *Tolypella nidifica* (?), many of which were, in the north-east, confined to Lough Neagh, have either entirely disappeared, or have become extremely rare. The gravel-beaches furnish examples of the disappearance of native plants owing to the removal of shingle and the building of sea-walls and fascines. *Matthiola sinuata*, *Crambe maritima*, *Calystegia Soldanella*, *Mertensia maritima*, and others are decreasing on this account.

Lastly, certain plants—very few, fortunately—are becoming extinct through the direct act of man. The Yew has been almost exterminated in certain districts—for smelting purposes at Killarney, for religious festivals in the north-east; the beautiful Killarney Fern has been ruthlessly destroyed for mere gain wherever found; the lovely Maidenhair of the Aran Isles is like to follow; and about the larger towns our favourite wild-flowers and ferns are vanishing rapidly.

To leave this painful subject, the flora has, on the other hand, been considerably enriched by the operations of man—though many of these acquisitions, the husbandman and gardener would willingly do without. It is in the deliberate or accidental introduction of a large number of species that the influence of man upon the flora is chiefly seen. Such plants may be grouped under several heads.

The majority of our introduced species are plants of cultivated land. These vary in standing from mere fleeting waifs (casuals) to species which are now well established throughout the country, though believed to have been originally introduced (colonists). The Poppies, Fumitories, Corn-salads, furnish good examples of the latter group, being probably of early accidental introduction; *Crepis biennis*, *C. taraxacifolia*, *Orobanche minor*, *Veronica peregrina* are examples of more recent arrivals of the same kind. Other plants have been deliberately introduced, and have escaped from the bounds of cultivation; such as *Petasites fragrans*, *Mimulus guttatus*, and *Acorus Calamus*. The head-quarters of the group is in tilled fields and garden-plots, and while some of the plants have effected

a permanent lodgment in the country, others, no doubt, still depend for their continued existence on the periodical introduction of fresh seed, and the protection against aggressive native species, which is afforded by the operations of husbandry. The number of colonists, denizens, and casuals rapidly decreases as we pass from light cultivated soils, to areas where the primitive surface is still undisturbed; the bogs, mountain-sides, and limestone crags generally possess a strictly indigenous flora.

On the other hand, we may over-reach the truth if we deny a plant's nativity because it is now often found in association with the works of man. Just as built walls are now the favourite haunt of many native plants which must have been originally confined to limestone rocks or such places (*e.g. Ceterach officinarum*, *Asplenium Ruta-muraria*, *Parietaria officinalis*), so no doubt some of the plants of cultivated fields and other artificially prepared habitats are truly indigenous species, which willingly forsake their limited native haunts for the wider field offered to them by human operations.

A large number of the plants of cultivated ground favour light soils. They are rarer in the west than in the east of Ireland, and reach their maximum in the south-east, where soil and climate best suit their requirements.

From the plants which have spread from gardens, or were sown with crops, we may turn to others of purely casual introduction. The majority of these are of sporadic occurrence, and frequently their unfamiliar forms appear for only a single season; but certain others have become thoroughly naturalized, and have spread far and wide over the country. The centres of dispersal of this element of the flora lie in the towns and harbours, where, about quays and railways, and waste ground, they maintain a precarious existence. Of those which have obtained a footing, certain species appear to prefer the neighbourhood of the towns, and may be abundant therein without spreading into the surrounding country. Thus, *Sisymbrium Irio* and *Mercurialis annua* have been long plentiful about Dublin, but disappear a few miles beyond the city boundary: *Senecio squalidus* is one of the most familiar sights of Cork; and *Bromus madritensis* is the botanical feature of Carrick-on-Suir.

Other plants travel from their ports of arrival far over the country. Traffic by road does not much help their dispersal, but inland navigation and railways are important factors in the dissemination of aquatic and of light-soil species respectively. Of the recent immigrants by water, the most famous is the Water-Thyme, *Elodea canadensis*, whose remarkable history need not be traced here. *Acorus Calamus*, introduced at Moira between 150 and 200 years ago, has spread to the Lagan Canal, and is now abundant from Lough Neagh to Belfast; and recently it has appeared on the Boyne. It is important to note that inland navigation is responsible for the spread of certain native aquatics as well. *Equisetum variegatum* has been carried up and down the Royal Canal till it now lines the banks for miles between Dublin and Mullingar, though it is one of the rarest plants elsewhere in the counties through which the canal passes. The same applies to several of the Charas that threaten to choke the waterways; and *Butomus*, *Sagittaria*, and other plants must, in certain counties, be sought along the canals, and not in the natural waters.

The spread of certain recently introduced species along the railway-systems of the country is so remarkable as to deserve mention. *Linaria minor* was first noticed near Cork about 1819. The first edition of "Cybele" reports it as abundant at Cork, and adds Enniscorthy, Carlow, and Dublin. Subsequent works record numerous other stations in the south and east, almost always on railway tracks. At the present time it is known to occur over almost the entire southern three-fourths of Ireland, chiefly on the systems of the Midland Great Western and Great Southern and Western railways. *Diplotaxis muralis* has a similar history. First observed at Portmarnock in Co. Dublin in 1887, it has spread in all directions, and now ranges, almost always on railway tracks, from Waterford to Sligo, and from Louth to the boundaries of Kerry. *Arenaria tenuifolia* furnishes a more recent instance. First observed in Kildare as late as 1897, it is now known to occur right across the Central Plain from Dublin to Galway, and from Roscommon and Meath southward to Limerick and S. Tipperary, being strictly confined to railway tracks. The three plants above-named have, in England, a wide distribution on light soils. The

most remarkable of the recent immigrants is a North American species, *Matricaria discoidea*. Its first appearance was in Dublin in 1894. Its range, as at present known, extends from Dublin, Louth, and Armagh on the east coast, to SE. Galway, W. Mayo, and Sligo on the west, and over this wide area it is found, frequently in immense profusion, on roadsides and railways.

An interesting case of plant-introduction, in which tillage is a secondary cause, may be quoted. The Black-headed Gull breeds in large colonies on lonely and undisturbed bogs, usually on tracts where numerous pools occur, and where a strictly indigenous flora prevails. Its food-supply during the nesting period is drawn chiefly from the adjoining cultivated lands, where it destroys great numbers of grubs and worms. From the tillage, it carries to the bogs a variety of seeds. How these seeds are brought is a point for ornithologists. The bird appears to be only very slightly a vegetable feeder, and from this fact, as well as from the size and nature of the seeds, it seems probable that the majority arrive adhering to the birds' feet. These seeds germinate on the bog, assisted no doubt by the guano, which is probably as beneficial to them as it is inimical to the bog-flora; and a colony of plants results, strangely out of keeping with its surroundings. The following list of plants, made at one of these bird-colonies in the centre of a large bog near Frankford in King's County, will illustrate this case of dispersal; not one of the plants on the list grew naturally on the bog, which extended unbroken for at least half a mile in every direction :—

Ranunculus acris.
Capsella Bursa-pastoris.
Cerastium triviale.
C. glomeratum.
Sagina procumbens.
Trifolium repens.
Epilobium obscurum.
Daucus Carota.
Bellis perennis.
Senecio vulgaris.
Hypochæris radicata.
Veronica Chamædrys.
V. arvensis.
Prunella vulgaris.
Plantago major.
Atriplex sp.
Polygonum Persicaria.
Rumex Acetosella.
Juncus effusus.
Holcus lanatus.
Poa annua.

III. THE SUBDIVISION OF IRELAND.

The plan adopted in this work, according to which Ireland is partitioned into forty county-divisions, is, except as regards the County of Donegal, that which was proposed by me in the "Journal of Botany" and the "Irish Naturalist," for February, 1896, in a paper entitled 'On the botanical Subdivision of Ireland.' This scheme is a modification of one put forward by the late Prof. Babington, of Cambridge, in a paper, 'Hints towards a Cybele Hibernica,' which was read before the Dublin University Zoological and Botanical Association, on February 18, 1859, and published in the "Natural History Review" of that year (vol. vi., part 2, pp. 533–537). Babington's scheme was an adaptation to Ireland of H. C. Watson's subdivision of Great Britain, as first published in "Cybele Britannica," vol. iii., 1852, and used in detail in his "Topographical Botany," 1873–74.

The botanical divisions correspond, in the main, with the Irish counties. It is clearly desirable that the unit of area employed in Great Britain and in Ireland respectively should correspond, for purposes of comparison and of general census; the size of the majority of the Irish counties is favourable to this object. The six largest counties are sub-divided, forming fourteen divisions of a little over average size. None of the counties are so small as to render it necessary to group them, as was done by Watson in one or two cases in Great Britain.

In working out the boundaries of the divisions, the following considerations appeared to be important:—

Natural boundaries.—Where clearly-defined natural boundaries, botanical, geological, or physical, exist, it is manifestly advantageous that they should be followed; but it is not always possible to follow them, on account of other considerations. The convenience of county-divisions is so great, that except in the subdividing of a large county, it does not appear desirable to forsake county boundaries.

Nature of boundaries.—Where a new boundary-line is required,

it is expedient that it should be something conspicuous—a railway, road, or river—in order that it may be easily found in the field; an imaginary line, such as a straight line between two places, though it looks well on a map, is often difficult to trace in the field.

Equalization of areas.—It is also desirable that, so far as possible, the country should be divided into portions of approximately equal area; but here again, the less the arrangement by counties is disturbed the better.

Utilization of past or future botanical work.—It is desirable that the scheme as regards subdivision of counties should harmonize with the subdivisions used, or to be used, in published or future county or local Floras; since this will save a large amount of labour, when it comes to working out the flora of any county.

The points of difference between the present scheme and that suggested by Babington, and the considerations which led to their adoption, I have discussed in the paper already referred to, and in the present place it will suffice to give a list of the divisions employed, and to define their boundaries, when these differ from the easily found boundaries of the counties.

Numbers and Names of the County-divisions.

1 Kerry South.
2 Kerry North.
3 Cork West.
4 Cork Mid.
5 Cork East.
6 Waterford.
7 Tipperary South.
8 Limerick.
9 Clare.
10 Tipperary North.
11 Kilkenny.
12 Wexford.
13 Carlow.
14 Queen's County.
15 Galway South-east.
16 Galway West.
17 Galway North-east.
18 King's County.
19 Kildare.
20 Wicklow.
21 Dublin.
22 Meath.
23 Westmeath.
24 Longford.
25 Roscommon.
26 Mayo East.
27 Mayo West.
28 Sligo.
29 Leitrim.
30 Cavan.
31 Louth.
32 Monaghan.
33 Fermanagh.
34 Donegal East.
35 Donegal West.
36 Tyrone.
37 Armagh.
38 Down.
39 Antrim.
40 Londonderry.

Definition of Boundaries:—

KERRY.—Kerry South is divided from Kerry North by the approximately south-east and north-west line which separates the baronies of Glanarought, Dunkerron, Iveragh, and Corkaguiny on the south from Magunihy and Trughanacmy on the north.

CORK.—Cork West is divided from Cork Mid by "a line drawn along the Killarney Junction Railway from the border of Co. Kerry to Millstreet, thence running across the country in a straight line to Macroom, thence in a similar line to Bandon and from that town, following the Bandon river, to the sea" (Allin: "Flowering Plants and Ferns of the County Cork," p. xii. 1883). Cork Mid is divided from Cork East by the Great Southern and Western Railway from Charleville to Cork, and thence by the western shore of Cork Harbour to the Ocean.

TIPPERARY is divided into North and South by the Great Southern and Western Railway.

GALWAY.—Galway West, or Connemara, is separated from Galway North-east by Lough Corrib and the River Corrib. The dividing line between North-east and South-east is the Midland Great Western Railway from Ballinasloe to Oranmore, where the line meets the sea at Oranmore village.

MAYO.—"A boundary between East and West is tolerably well marked by Lough Mask and the course of the River Ayle, as far as a small lake above Ballyhean Church; from thence it is imaginary for a short distance, until it reaches the nearest point on the road from Tuam to Castlebar, close to a hamlet called Tully; then it follows that road as far as Castlebar, and from thence descends the course of the water through Lough Cullin, and by the River Moy to the sea at Ballina" (Babington, *loc. cit.*).

DONEGAL is divided into East and West by a line dividing the Baronies of Bannagh, Boylagh, and Kilmacrenan from Tirhugh, Raphoe, and Inishowen. This line joins the head of Donegal Bay to the head of Lough Swilly, cutting off the metamorphic mountainous district of West Donegal from the limestones of Tirhugh, the cultivated lowlands of Raphoe, and the wild peninsula of Inishowen. This NE. and SW. line divides the county into two

tolerably equal parts. The subdivision is an adaptation of a suggestion made ("Irish Nat.," ix. 44) by Mr. Hart, the author of the county Flora.

The whole of Ireland, 32,524 square miles, is thus divided into 40 portions of as nearly equal size as conditions will permit; and these divisions closely approximate in area to Watson's 112 "vice-counties" of Great Britain. To be exact, the average size of the British divisions is 804 square miles each, of the Irish 813 square miles. On account of the variation in size of the counties, it is not possible to attain the ideal—exact equality of area of the 40 divisions. As a matter of fact, the divisions vary in size from 1336 square miles (Mayo West) to 316 square miles (Louth); but the majority approach reasonably near to the average, so that the number of county-divisions in which a plant occurs affords a fair indication of its area of distribution.

Numbering of the Divisions.—The divisions are numbered according to a backwards-and-forwards line, commencing in the south-west, ending in the north-east. This progression corresponds with Watson's numbering of the British vice-counties, which also runs from south to north, though with less regularity, since consecutive numbers are bestowed on the vice-counties included in each of his eighteen "Provinces." The advantages of grouping the divisions in a similar manner under the twelve Irish botanical districts which were proposed by Prof. Babington and employed in "Cybele Hibernica" are slight in comparison with the suggestive facts of plant-distribution brought out by the adoption of a regular progression from a lower to a higher latitude—from a higher to a lower temperature. It will be observed that the lines of numbering run NW. and SE., rather than W. and E. This is the direction of the isotherms of winter and spring; and a glance at the botanical map in "Cybele Hibernica" will show that the distribution of the characteristic Irish plants has the same general trend. The advantage of following these natural lines is clear.

It will be seen that according to the plan of numbering adopted, the figures are themselves an indication of the range of a species. If a plant is recorded from divisions 1 to 10, we know at once that it is confined to the southern fourth of Ireland—the Province of

Munster. If it occurs in 1 to 20, its area of distribution is the southern half of Ireland; if in 21 to 40, the northern half. If in 81 to 40, the northern fourth, approximately the Province of Ulster. In order to bring out the eastern and western range of plants in Ireland, a tripartite division of the country into West, Centre, and East is employed, which is shown on map III., and is further referred to when explaining the formula (p. xcv.)

A brief description of the physical and botanical features of each division may be found useful.

1. Kerry South.

South-western. Area, 930 square miles. Maritime, with an extensive coast-line of bold and varied character. This division is formed of great folds of Lower Devonian slates and sandstones; the anticlines including the highest mountains in Ireland (Macgillicuddy's Reeks, 3414 feet), and running in massive promontories far into the Atlantic, the synclinal valleys occupied by Carboniferous limestone to a limited extent. Rivers small and rapid. Lakelets and tarns numerous. One-third of the total surface is unreclaimed mountain; and of the remainder, two-thirds is under grass. Ten per cent. only is returned as under crops. Twenty-four per cent. of the surface is over 1000 feet elevation—a figure exceeded in Wicklow only.

The exploration of the flora has engaged the attention of Dr. Scully for many years past: the lists with which he has supplied me are very full, and raise this division to the first rank as regards botanical knowledge.

Flora 680 species.[1] Here the Cantabrian group of plants attains its greatest development, and forms the most remarkable feature of the flora. The rarity of limestone and large proportion of mountainous country produce a paucity of calcicole and of marsh and

[1] In this and all other statistics the numbers refer to aggregate species—*i.e.* to those printed in heavy type in the body of the work. Segregates are grouped under their natural aggregates. For instance, the Fruticose *Rubi* are counted as one species: ikewise the Dactyloid Saxifrages, and the segregates of *Callitriche verna*. The *Hieracia* are grouped similarly, under the species printed in heavy type. Doubtful records are omitted.

river plants. The alpine flora is poor, when the superior elevation of the hills is taken into account. One species, *Simethis bicolor*, is in Ireland confined to this division. Another, *Lathyrus maritimus*, now extinct, had here its only Irish station. A large number of rare or characteristic plants occur[1] :—

Thalictrum alpinum, 5.
Alchemilla alpina, 2.
Saxifraga Geum, 3.
Saxifraga umbrosa, 11.
Carum verticillatum, 6.
Asperula cynanchica, 8.
Inula crithmoides, 5.
Arbutus Unedo, 3.
Microcala filiformis, 3.
Sibthorpia europæa, 2.
Bartsia viscosa, 7.
Pinguicula grandiflora, 5.
Polygonum viviparum, 3.
Euphorbia hiberna, 11.
†Sisyrinchium angustifolium, 5.
Simethis bicolor, 1.
†Allium Scorodoprasum, 5.
†Juncus tenuis, 4.
Naias flexilis, 3.
Eriocaulon septangulare, 7.
Carex punctata, 5.
Deschampsia alpina, 3.
Poa alpina, 2.
Asplenium lanceolatum, 3.
Aspidium Lonchitis, 6.
Isoetes echinospora, 4.
Pilularia globulifera, 5.
Chara canescens, 3.
Nitella Nordstedtiana, 2.

2. Kerry North.

South-western. Area 923 square miles. Maritime, with a more limited and less broken coast-line than Kerry South. Formed chiefly of Millstone Grit and Coal-measures, which often rise to over 1000 feet, with a broad irregular band of low-lying Carboniferous limestone along the coast. Highest points—Slieve Mish (2796 feet) and Mangerton (2756), both on the boundary line between Kerry N. and S. No large rivers, and no lakes except in the neighbourhood of Killarney. The area of mountain land is less than half that in Kerry S., being 15 per cent. Full half the total surface is under pasture, and one-fifth under crops. Eight per cent. is turf bog. Our very complete knowledge of the flora is almost entirely due to Dr. Scully.

Flora 705 species. Lowland plants are in general better

[1] The numbers affixed to the species show the total number of divisions in which each certainly occurs, and give an indication of its rarity in Ireland.

represented than in division 1; in the south the Cantabrian and mountain plants hold sway; so that, though less generally interesting, the flora is richer by 25 species. No plant is confined to the division; and the rare species are mostly those characteristic of South Kerry:—

Rosa micrantha, 4.
Saxifraga Geum, 3.
Saxifraga umbrosa, 11.
Carum verticillatum, 6.
Galium sylvestre, 6.
Asperula cynanchica, 8.
Arbutus Unedo, 2.
Microcala filiformis, 3.
Sibthorpia europæa, 2.
Bartsia viscosa, 7.
Pinguicula grandiflora, 5.
Euphorbia hiberna, 11.
†Sisyrinchium angustifolium, 5.
†Allium Scorodoprasum, 5.
†Juncus tenuis, 4.
Naias flexilis, 3.
Scirpus parvulus, 2.
Carex Bœnninghausiana, 2.
Carex punctata, 5.
Deschampsia alpina, 3.
Aspidium Lonchitis, 6.
Lycopodium inundatum, 3.
Isoetes echinospora, 4.
Nitella Nordstedtiana, 2.

3. Cork West.

South-western. Area 1145 square miles. Maritime, with a deeply indented, intricate, and island-studded coast-line. Formed of Old Red Sandstone folds, which rise in the west into high mountain ranges (2321 feet, &c.). In the southern part broad synclines are occupied by Carboniferous slate. The rivers are, in general, small and rapid, the Bandon River being the only stream of any importance. Some lakes lie among the western mountains. Half the surface is under grass, and one-sixth under crops. The percentage of mountain land is 22; woods and low-level bogs are rare. This division has long been famous as the home of many rarities, and Mr. Allin's "Flora of Cork" (1883) fully summarizes its botany. More recently the flora has been worked out in detail by Mr. Phillips, on whose very full lists for this and the two other divisions of Cork the information herein given is based.

Flora 705 species. Like Kerry South, remarkable for the conspicuous development of the Cantabrian group, chiefly in the south and west. Lowland and calcicole plants are below the

average; otherwise the flora is rich. *Ranunculus tripartitus* is peculiar to this division: rare or characteristic plants are numerous:—

Ranunculus tripartitus, 1.
†Lepidium latifolium, 5.
Helianthemum guttatum, 2.
Viola lutea, 5.
Geranium rotundifolium, 5.
Ornithopus perpusillus, 3.
Rosa micrantha, 4.
Saxifraga Geum, 3.
Saxifraga umbrosa, 11.
Carum verticillatum, 6.
Inula crithmoides, 5.
*Senecio squalidus, 4.
Arbutus Unedo, 3.
Microcala filiformis, 3.
Linaria repens, 5.
†Antirrhinum Orontium, 3.
Bartsia viscosa, 7.
Orobanche major, 5.
Pinguicula grandiflora, 5.
†Rumex pulcher, 3.
Euphorbia hiberna, 11.
†Euphorbia amygdaloides, 3.
Spiranthes Romanzoffiana, 3.
†Sisyrinchium angustifolium, 5.
†Allium Scorodoprasum, 5.
†Juncus tenuis, 4.
Juncus acutus, 4.
Eriocaulon septangulare, 7.
Carex punctata, 5.
Asplenium lanceolatum, 3.
Lycopodium inundatum, 3.

4. Cork Mid.

Southern. Area 950 square miles. Maritime along its southern edge, with extensive estuarine waters in Queenstown Harbour. Surface, in general, high and undulating, formed of Old Red Sandstone folds, with limestone troughs, along two of which the only considerable streams in the division, the Lee and Blackwater, find their way eastward to Cork and Mallow respectively. The highest land (Boggeragh Mountains, 2119 feet) lies in the centre, between the two river-valleys mentioned. In the north-west is a tract of hilly Coal-measure country. Lakes are absent. Lower and more fertile than Cork West. The area of mountain land has dropped to 5 per cent.; that of grass has risen to 58, and of crops to 25 per cent. The division has been recently well explored by Mr. Phillips, and numerous old records (Allin *19*, Power *682*, Drummond *287*) help to swell the list.

Flora 672 species. There is a diminution of the Cantabrian and other West Coast elements, and an increase of calcicole and

light-soil plants. The rare or characteristic plants are in general the same as those of Cork West :—

Lepidium latifolium, 5.
Geranium rotundifolium, 5.
Trigonella ornithopodioides, 5.
Rosa micrantha, 4.
Saxifraga umbrosa, 11.
*Senecio squalidus, 4.
Linaria repens, 5.
†Antirrhinum Orontium, 3.
Bartsia viscosa, 7.
Orobanche major, 5.
Pinguicula grandiflora, 5.
Euphorbia hiberna, 11.
†Euphorbia amygdaloides, 3.
†Allium Scorodoprasum, 5.
Carex axillaris, 4.
Carex punctata, 5.
Asplenium lanceolatum, 3.

5. Cork East.

Southern. Area 795 square miles. Maritime along the southern side, the coast line including part of the wide estuaries of the Lee and Blackwater. Like the rest of Cork, formed of folds of Old Red Sandstone, with limestone-filled synclines in the north and south. Surface more level and fertile than Cork Mid, which is itself more level and fertile than Cork West. Highest ground the Nagles Mountains (1406 feet). North of these the beautiful Blackwater runs through a limestone valley right across the division, the largest river in this area. No lakes. State of cultivation like that of Cork Mid; 54 per cent. of grass, 28 per cent. of crops, mountain land 9 per cent.; peat bog almost absent. Mr. Phillips' list, backed by numerous older observations (see under Cork Mid), supplies full information regarding the vegetation.

Flora 700 species. There is a further diminution in the numbers of the western groups; but on the whole a richer flora. *Œnanthe pimpinelloides* is, so far as at present known, confined to this division. The list of rare or characteristic plants is much the same as that for Cork Mid :—

†Lepidium latifolium, 5.
Geranium rotundifolium, 5.
Trifolium scabrum, 4.
Rosa micrantha, 4.
Œnanthe pimpinelloides, 1.
*Senecio squalidus, 4.
†Antirrhinum Orontium, 3.
Bartsia viscosa, 7.
Orobanche major, 5.
Pinguicula grandiflora, 5.
Rumex maritimus, 3.
†Rumex pulcher, 3.
Euphorbia hiberna, 11.
†Allium Scorodoprasum, 5.
Carex punctata, 5.

6. Waterford.

Southern. Area 721 square miles. Maritime, with an extensive coast-line, generally cliff-bound, and several deep bays and estuaries. Surface very varied, owing to the diversity of geological conditions. In the west and north, ridges of Old Red Sandstone from the Comeragh (2597 feet) and Knockmealdown (2609 feet) mountains. The eastern part of the county is formed of Silurian grits and slates, with intrusive felsites. The only limestone in the county stretches east and west along the Blackwater valley, and continues eastward to Dungarvan, but it is so covered with non-calcareous detritus from the high grounds on either side as to have but little effect on the flora. The Suir, one of the larger Irish rivers, forms the northern boundary of Waterford, and the lower course of the lovely Blackwater lies through the south-western portion of the county; both are tidal and navigable for many miles above their wide mouths. Lakes are almost entirely absent. Area under grass about the average, being 54 per cent.; crops 17 per cent.; mountain land over the average, being 17 per cent. Exploration, chiefly the work of Mr. Hart and myself, the former along the coast and in the mountains, I on the lower grounds. The county is now fairly explored, the Blackwater valley and the extreme east being the most promising field for future work.

Flora 663 species. The western group of plants, represented by *Saxifraga umbrosa* and *Euphorbia hiberna*, attains here its eastern limit, and several of the local East Coast species, such as *Diotis* and *Asparagus*, make their first appearance. On account of physical conditions, there is a paucity of calcicole and aquatic plants. *Brachypodium pinnatum* has here its only Irish station. The rarer or characteristic species are:—

Corydalis claviculata, 5.
†Lepidium latifolium, 5.
Saxifraga umbrosa, 11.
Inula crithmoides, 5.
Diotis candidissima, 2.
Ligustrum vulgare, 3.
Bartsia viscosa, 7.
†Rumex pulcher, 3.
Euphorbia hiberna, 11.
Asparagus officinalis, 2.
Juncus acutus, 4.
‡Bromus madritensis, 3.
Brachypodium pinnatum, 1.

7. Tipperary South.

Southern. Area 850 square miles. Inland, barely touching tidal waters at Carrick-on-Suir. Here for the first time we enter the level limestone country. The greater portion of the division is of this character, but in the south the Old Red Sandstone masses of the Knockmealdowns (2609 feet) form the county boundary, and portion of the fine mountain-ridge of the Galtees (3025 feet) lies within the present division. Another mass of Old Red Sandstone and Silurian rocks forms Slievenaman (2364 feet), which rises in solitary grandeur in the south-east. In the north-east, the limestone is concealed beneath superincumbent Coal-measures. The whole area is drained by the Suir and its tributaries, a large river in its lower course, where it bounds South Tipperary and Waterford. The extensive low-level peat-bogs so characteristic of the Central Plain make their appearance for the first time in the northern portion of the division. Four-fifths of the surface is under grass and crops—grass 59, crops 22 per cent. Over 9 per cent. is mountain-land. The list of species is chiefly due to my own work, with valuable additions from the mountains by Mr. Hart. Except for the north-eastern portion, the division is tolerably well explored.

Flora 594 species. The Central Plain flora, with its numerous marsh, bog, and calcicole plants, is here for the first time characteristically displayed. No plants are peculiar to the division, and very few of the rarest Irish species occur :—

Arabis petræa, 2.	‡Picris hieracioides, 3.
Saxifraga umbrosa, 11.	‡Bromus madritensis, 3.

8. Limerick.

South-western. Area 1064 square miles. Has no open sea coast, but is bordered along its northern margin by the wide sea-inlet of the Shannon mouth. The surface is formed mainly of undulating limestone, with patches of older and newer non-calcareous rocks. In the west, Coal-measures form extensive high grounds, which rise to over 1000 feet in many places. In the extreme south-east, the county includes portion of the lofty range

of the Galtees, the boundary passing over the summit of Galtymore (3015 feet). The surface falls generally from south to north, and along the Shannon shores is low, with much salt-marsh. Excepting the Shannon, which ceases to be tidal at Limerick City, there are no large rivers, and lakes are small and extremely few. Low-level bogs are almost absent. Nearly nine-tenths of the county is under grass and crops—grass 66, crops 23 per cent. The botany has been very little known till recently, and exploration has been almost confined to the north, within 10 miles of the Shannon, where the flora is rich and varied. There is no portion of the county that will not repay further work.

Flora, 623 species. Calcicole, paludal, and halophyte groups largely represented. Probably many rare species occur; those which, according to the standard adopted for other divisions, are listed below, were mostly discovered within the last year:—

†Lepidium latifolium, 5.
Viola hirta, 5.
Asperula cynanchica, 8.
Euphrasia Salisburgensis, 6.
Rumex maritimus, 3.
Euphorbia hiberna, 11.
Scirpus triqueter, 2.

9. Clare.

Western. Area 1348 square miles, including the Aran Islands. A large, varied, and most interesting county. Bounded on the west by the Atlantic, the coast being extensive and very bold, with sandy bays and magnificent cliff-ranges. The southern and eastern boundaries are formed by the wide marine and estuarine Shannon mouth, by the Shannon in its rapid fall from Killaloe to Limerick, and by Lough Derg, one of the great river-lakes of the same noble stream. Undulating Coal-measure country, rising to over 1200 feet, forms the SW. part of the county. In the SE. the Old Red Sandstone and Silurians form mountains, rising in Slieve Bernagh to 1746 feet. Elsewhere the Carboniferous limestone chiefly holds sway. In the NW., in the barony of Burren, the limestone rises into bare grey terraced hills, 1000 to 1100 feet high, tenanted by a flora of remarkable character. The Aran Islands, which politically belong to Co. Galway, but geologically and botanically to Clare, are a seaward prolongation of the Burren limestones, and their flora even sur-

passes in interest that of the mainland hills. Excepting the Shannon, which borders the county, the rivers of Clare are insignificant, but lakes of all sizes are abundant, and are widely distributed. Grass 61 per cent.; crops 18 per cent.; barren mountain land 10 per cent. The greater portion of Clare is of low elevation, 61 per cent. being under 250 feet. The exploration of this area is still incomplete. The fascinating flora of Burren and Aran has attracted many observers, and the north is now well known, but the great tract lying east of the Fergus is still almost unexplored, and the centre offers a promising field for research. The Shannon estuary has been investigated by Mr. Stewart.

Flora 712 species. The most striking feature is the intermixture of southern plants and alpines, in immense profusion, on the bare limestone of Burren and Aran, but a number of other plants very rare in Ireland occur, which do not belong to either of these groups. *Astragalus Hypoglottis* and *Ajuga pyramidalis* are confined to the division. Rare or characteristic plants are numerous, and include:—

Matthiola sinuata, 2.
Helianthemum vineale, 2.
Viola hirta, 5.
Viola stagnina, 4.
Viola lutea, 5.
Arenaria verna, 3.
Geranium rotundifolium, 5.
Astragalus Hypoglottis, 1.
Spiræa Filipendula, 2.
Potentilla fruticosa, 4.
Galium sylvestre, 6.
Asperula cynanchica, 8.
Gentiana verna, 5.
Limosella aquatica, 2.
Euphrasia Salisburgensis, 6.
Orobanche rubra, 5.
Teucrium Scordium, 7.
Ajuga pyramidalis, 1.
Epipactis atro-rubens, 4.
Habenaria intacta, 5.
†Sisyrinchium angustifolium, 5.
†Juncus tenuis, 4.
Potamogeton lanceolatus, 2.
Eriocaulon septangulare, 7.
Scirpus triqueter, 2.
Calamagrostis Epigeios, 3.
Adiantum Capillus-Veneris, 6.
Polypodium Dryopteris, 4.

10. Tipperary North.

South-central. Area 810 square miles. Inland. The middle portion of this division consists of heathery mountains formed of Old Red and Silurian rocks, the highest point being Keeper (2278 feet). The remainder is occupied by low limestone country,

with tillage, marshes, and extensive bogs, and occasional esker ridges. The Shannon flows for 40 miles along the NW. edge, spreading out for the greater part of this distance into the broad expanse of Lough Derg, with a sinuous shore-line and numerous islets. No other important rivers or lakes are found in the division. Unreclaimed land only about 10 per cent.; grass 60, crops 25 per cent. As regards exploration, the hill-country is the least known, but will not yield much. On the plain, no part has been thoroughly worked except about Dromineer on Lough Derg; but as a whole the flora is tolerably well known, chiefly by Mr. Colgan's work and my own.

Flora 576 species. The only group of special interest is found on the limestone shores of Lough Derg, where there is a remarkable assemblage of plants which has been already referred to (p. xxxiii). The rarest species in the division are all inhabitants of this region:—

Inula salicina, 2.	Teucrium Scordium, 7.	Chara tomentosa, 5.

11. Kilkenny.

South-eastern. Area 796 square miles. Inland, with many miles of tidal waters on the southern margin—the estuaries of the Suir and Barrow. The surface is varied, as a consequence of frequent petrological changes. In the north, the Coal-measures form a table-land of cultivated high ground, of about 1000 feet elevation. The centre is chiefly undulating limestone, highly tilled. In the east Old Red and Silurian ridges rise to 1200 feet, and the heather-clad cone of Brandon, the southern outpost of the Leinster granites, towers over the Barrow to a height of 1694 feet. In the south, Old Red Sandstone and Silurian rocks chiefly hold sway, forming elevated heathy country. Kilkenny can claim a greater variety of river-scenery than any other county in Ireland. The beautiful Nore pursues a southern course right across the county; the Barrow forms the eastern boundary for many miles; and the Suir, here an imposing river, runs along the southern margin. The only lake in the county is the little Lough Cullin; and bogs are equally rare, occurring only in the extreme NW., on the borders of Tipperary. Grass land

occupies 62 per cent. of the surface, and crops 27 per cent. The flora is tolerably well known. Exploration has been chiefly devoted to the valleys of the Nore and Barrow, which form the most promising part of the county, and yield a rich flora. The west, and the coal-field in the north-east, are still almost virgin ground.

Flora 616 species. The best plants are:—

Corydalis claviculata, 5.	Campanula Trachelium, 4.
‡Draba muralis, 4.	Colchicum autumnale, 2.

The two last, which have a restricted south-eastern range in Ireland, have their head-quarters in this division.

12. Wexford.

South-eastern. Area 901 square miles. Maritime, marine or tidal waters forming two-thirds of the periphery of the county. Shores generally low, sandy or gravelly. An undulating and fertile county, composed almost entirely of older Palæozoic slates, shales, and grits, broken up by numerous narrow parallel intrusions of fine-grained granitic rocks. The Carboniferous limestone is represented only by a small area about Wexford town. Heathery hills are numerous, and along the eastern margin rise the Mount Leinster (2610 feet) and Blackstairs (2409 feet) chain, portion of the granite back-bone of Leinster. The largest river is the Slaney, which flows in a southerly direction across the county to the sea, its lower reaches being tidal and edged with marshes. The lower estuarine portion of the Barrow forms part of the western boundary. Lakes are absent, and bogs and eskers likewise. A fertile county, having 55 per cent. of the surface under grass and 33 per cent. under crops. Only 3 per cent. is returned as barren mountain land. This division has been well though not uniformly explored, the Rev. E. S. Marshall's recent examination of the interesting south-eastern portion being especially thorough. The whole coast and Barrow estuary are well known, but further work is needed in the centre and north.

Flora 689 species. Here the East Coast flora attains its greatest development, and supplies many characteristic light-soil and maritime plants very local in Ireland. *Chara connivens* is confined to this

division, as is the doubtfully native *Sisyrinchium californicum*. Rare or characteristic species :—

Matthiola sinuata, 2.
Viola hirta, 5.
Geranium rotundifolium, 5.
Trigonella ornithopodioides, 5.
Trifolium scabrum, 4.
Trifolium glomeratum, 2.
Ornithopus perpusillus, 3.
Inula crithmoides, 5.
Diotis candidissima, 2.
Orobanche major, 5.
Lamium Galeobdolon, 3.
Rumex maritimus, 3.
Asparagus officinalis, 2.
Juncus acutus, 4.
Carex divisa, 2.
Glyceria Borreri, 2.
Festuca uniglumis, 5.
Elymus arenarius, 5.
Equisetum Moorei, 2.
Chara connivens, 1.
Chara canescens, 3.

13. Carlow.

South-eastern. Area 346 square miles. A small inland county, barely touching tidal waters in the extreme south. The eastern three-fourths are formed of granite, low and fertile except along the SE. margin, where the bold Mount Leinster chain (2610 feet) separates Carlow from Wexford for 15 miles. In the west, a band of Carboniferous limestone runs north and south along the Barrow valley, overlain on the western side by the high cultivated lands of the Kilkenny coal-field. The river Slaney, in its upper course, runs southward across the eastern part; and in the west the larger Barrow flows from north to south, passing through a portion of the county, and forming the boundary for a long distance. Natural lakes are absent. Of the few small bogs that once existed in the south, only the dug-out sites remain, but the typical bog flora still lingers there. Marshes are very few, and eskers unknown. A fertile county, with 55 per cent. under grass, and 33 per cent. under crops. Mountain land is less than 5 per cent. Flora tolerably completely known, though exploration has been somewhat local, and chiefly along the Barrow and Slaney, in the west and east. The granite country in the centre is still only slightly explored.

Flora 578 species, without any very marked features. Rarest plants :—

‡Picris hieracioides, 3. Campanula Trachelium, 4. Colchicum autumnale, 2.

The second and fourth of these are characteristic of this portion of Ireland.

14. Queen's County.

Central. Area 664 square miles. Inland. In the NW., the broad heather-clad range of Slieve Bloom belongs chiefly to this county, and shows a number of smooth summits of 1000 to 1733 feet. These uplands are a denuded anticlinal ridge, formed of Old Red and Silurian rocks. In the SE., Coal-measures prevail, forming cultivated uplands and hills of 800 to 1100 feet. Elsewhere, the broad limestone floor extends in its characteristic form, the surface consisting of low fertile ridges and marshy bottoms, with great bogs between. The Barrow flows along the eastern and northern margins of the county, often amid extensive marshes, and has its source on Slieve Bloom. The western half forms the chief gathering grounds of the Nore; the drainage of the whole county is carried on by these two river. Lakes are almost nil. In the NE., branches of the Grand Canal run west and south from Monasterevan. A fine esker-ridge runs N. and S. through Maryborough, and yields a rich gravel-flora. A typical Central Plain county, with 54 per cent. of grass, 30 per cent. of crops, and nearly 5 per cent. of bog. Exploration chiefly my own work, in various parts of the area. No portion now remains altogether unexplored, but excepting the neighbourhood of Maryborough there is no part that will not bear further work.

Flora 582 species, without any special features. Rarest plants:—

‡Picris hieracioides, 3. Campanula Trachelium, 4. Carex axillaris, 4.

15. Galway SE.

Western. Area about 738 square miles. Maritime to a small extent, the western margin fronting the indented head of Galway Bay for some miles. The eastern boundary is formed by the rivers Suck and Shannon, and by the grand lake-like expansion which is called Lough Derg. There is no other river of any consequence, but several good-sized lakes lie in the centre and south. Near the southern boundary rises Slieve Aughty (1074 feet) a broad group of Old Red and Silurian hills, boggy and bare. Everywhere else, the

low limestone country extends without interruption. In the east, along the Shannon, it is varied by enormous bogs and occasional eskers, and is well wooded in places. As we go westward, woods and bogs grow scarce, and the brown soil gives place more and more to bare weather-worn limestone, till near the sea-board grey stone walls enclose fields of grey rock, hopeless to the agriculturist, but fascinating to the botanist. The area under grass is high—61 per cent.: and that under crops low—18 per cent.; turf bog and mountain land are each represented by about 7 per cent. Many botanists have visited this division on account of the great interest attaching to two localities—the neighbourhood of Woodford and Lough Derg in the south-east, and of the "limestone crag" country of Castle Taylor and Gort in the south-west. The rest of the division is still imperfectly known.

Flora 662 species, including many rare plants, belonging chiefly to the Shannon Lakes group or to the Burren group:—

Viola stagnina, 4.
Spiræa Filipendula, 2.
Galium sylvestre, 6.
Asperula cynanchica, 8.
Inula salicina, 2.
Ligustrum vulgare, 3.
Gentiana verna, 5.
Limosella aquatica, 2.
Euphrasia Salisburgensis, 6.
Teucrium Scordium, 7.
Euphorbia hiberna, 11.
Epipactis atro-rubens, 4.
Habenaria intacta, 5.
†Sisyrinchium angustifolium, 5.
Chara tomentosa, 5.

16. Galway W.

Western. Area 826 square miles, including Inishbofin, excluding Aran. Maritime, facing the Atlantic with a tangled coast-line of great extent along the west and south, formed of a maze of inlets and islets. The eastern boundary is formed by the great lakes of Mask and Corrib, so that the division is almost surrounded by water. This is an area of rugged metamorphic and igneous rocks of great age, rising into beautiful mountain groups in Maam Turk and the Twelve Bens, both of which lie towards the centre, and show a number of rocky summits of over 2000 feet. Elsewhere the ground is undulating, sometimes low, sometimes mountainous, but almost everywhere having a surface of bog, rock, or lake.

The number of lakes is unequalled in any other part of Ireland; almost one-ninth of this entire division is under water. Along the Lough Corrib shore, from Oughterard to Galway, a broad belt of Carboniferous limestone extends, having a rich flora. Elsewhere the exposure and the inhospitable rock and sodden boggy soil are unfavourable to a large variety of plant life, and only here and there a patch or ridge of Boulder-clay produces an oasis of crops and green meadow among the brown heather. Grass 47 per cent., crops only 11 per cent.; peat bog 7 per cent., barren mountain land as much as 24 per cent. Flora well known, though work has been very local; but the large unexplored areas are mostly wild and barren. The east is the best known portion.

Flora 665 species. Here we are in the head-quarters of the Heaths that form a leading feature of the Cantabrian group; and other representatives of both the calcifuge and calcicole groups of the West Coast plants enhance the high interest of the flora. Four plants are confined to this division:—

Erica Mackaii.	Carex trinervis.
Potamogeton Kirkii.	Deschampsia discolor.

Rare or characteristic plants are numerous:—

Thalictrum alpinum, 5.	Orobanche rubra, 5.
Helianthemum guttatum, 2.	Epipactis atro-rubens, 4.
Helianthemum vineale, 2.	Habenaria intacta, 5.
Vicia Orobus, 4.	Naias flexilis, 3.
Potentilla fruticosa, 4.	Eriocaulon septangulare, 7.
Saxifraga umbrosa, 11.	Calamagrostis Epigeios, 3.
Asperula cynanchica, 8.	Adiantum Capillus-Veneris, 6.
Hieracium argenteum, 4.	Aspidium Lonchitis, 6.
Erica mediterranea, 2.	Lycopodium inundatum, 3.
Dabeocia polifolia, 3.	Isoetes echinospora, 4.
Gentiana verna, 5.	Pilularia globulifera, 3.

17. Galway NE.

Western. Area about 840 square miles. Inland, save for a few miles of coast-line in the SW., where it borders on Galway Bay. Excepting a couple of insignificant patches of Old Red, this is entirely a limestone area, and is almost devoid of hills, two

[illegible] of 557 and 543 feet elevation, dominating the [illegible] As in Galway SE., the surface is covered with [illegible] and bogs in many places, especially in the east, the country [illegible] weaker towards the west, with a good deal of grey lime-[illegible] pavement; but the Connemara mountains act as a shield [illegible] the fury of Atlantic gales, and the surface is less bare and [illegible] than that of division 15. The Suck, which forms the [illegible] boundary, is the only considerable river. For many miles, [illegible] western boundary is formed by Lough Corrib, and some small [illegible] are found in the NW. Several fine esker-ridges raise their [illegible] slopes for miles over the level surface. Grass land occupies [illegible] per cent. of the surface; crops 17½ per cent.; turf bog as much as 18 per cent. The flora of this area was till recently almost [illegible] unknown, and our knowledge of it, resting solely on my own [illegible]rations, is still incomplete. The centre, western edge (Lough [illegible] and south-east (Clonbrock neighbourhood) alone have been [illegible]amined. In the north-east there is a wide area of limestone country which no botanist has ever visited.

Flora 608 species. The most interesting feature is the prolon-[illegible]ation northward of the Burren flora along the bare limestone on or near the shores of Lough Corrib. Rare or characteristic species:—

Fumaria densiflora, 4.
Vicia Orobus, 4.
Potentilla fruticosa, 4.
Galium sylvestre, 6.
Asperula cynanchica, 8.
Gentiana verna, 5.
Euphrasia Salisburgensis, 6.
Epipactis atro-rubens, 4.
Habenaria intacta, 5.
Potamogeton lanceolatus, 2.
Eriocaulon septangulare, 7.
Chara canescens, 3.
Nitella tenuissima, 2.

18. King's County.

Central. Area 772 square miles. A typical Central Plain county. In the SW., the western slopes of the Old Red and Silurian highlands of Slieve Bloom (Arderin 1733 feet) belong to this division, but elsewhere the level limestone stretches, covered with vast bogs, tillage, woods, and marshy meadow-land, so that Croghan Hill (769 feet), the stump of a little volcano rising in the NE., forms a conspicuous landmark through all the neighbouring counties. The

drainage is mainly towards the bog-fringed Shannon, which forms the western boundary for five-and-twenty miles; in the east the Boyne has its source, and the upper waters of the Barrow skirt the county. A few lakelets, mostly boggy, are the only standing water. The Grand Canal passes east and west right across the division. Some of the finest esker-ridges in Ireland are situated in the centre and west. No less than 95 per cent. of the area is below 500 feet elevation. Grass land covers half the total surface, and crops 22 per cent. The area of low-level bog is as high as 19 per cent. Flora tolerably well known; but though no large tract is unexplored, no portion of the county can be yet said to be thoroughly worked out.

Flora 554 species, of the character typical of the Central Plain. Very few rare plants occur:—

Vicia Orobus, 4. Campanula Trachelium, 4.

19. Kildare.

East-central. Area 654 square miles. The most level county in Ireland. The north and west is typical Central Plain country—flat limestone covered by bog, marsh, wood, pasture and tillage, with a large proportion of the two first. In the south and east the ground is more undulating. Along the eastern margin the underlying Silurian slates appear, and form eminences of 800 to 1000 feet, the foot-hills of the Wicklow mountains. Post-Carboniferous movements have produced a series of Silurian knolls (Hill of Allen, 676 feet) north of the town of Kildare, insignificant were it not by contrast with the enormous plain on which they look down. All the east of the county is drained by the Liffey, here a clear and rippling stream. The larger and more sluggish Barrow runs along the western edge. There is not a lake in the county, but hydrophytes find a home in the Grand Canal, which traverses the division, and the Royal Canal, which fringes it on the north. Gravel is locally abundant, the breezy Curragh being the largest mass of gravel in Ireland. Grass land 62 per cent., bogs 7·5 per cent.—both above the average. Crops about normal—24 per cent. Exploration, chiefly along the Barrow and in the north-east. Much further work is required; a large area in the north is still almost untouched.

Flora 561 species—a characteristic Central Plain flora. Rarest species :—

Viola hirta, 5.
Viola lutea, 5.
Hypericum hirsutum, 4.
Senecio erucifolius, 5.
Scrophularia umbrosa, 2.

20. Wicklow.

Eastern. Area 781 square miles. Maritime, with a coast-line characterized by extensive shingle-beaches, broken only by a couple of rocky headlands. The county is a mass of mountains. A great core of granite runs north and south, and on either side it is flanked by picturesque highlands of Silurian rocks. The greatest elevation is attained by Lugnaquilla (3039 feet), and over a dozen other summits exceed 2000 feet. Wicklow contains a greater area of high land than any other county in Ireland, no less than 26 per cent. of the surface being over 1000 feet elevation. No large streams are found in this area, the greater portion of which is drained by the Ovoca River. The western slopes form the gathering grounds of the Slaney and Liffey. Several beautiful lakes lie among the hills. Low-level bogs and eskers are unknown. Extensive salt-marshes occur on the coast, but elsewhere flat country is quite absent. Only 12 per cent. of the surface is below 250 feet elevation. Limestone rock is not found in the county, but in the north the limestone drift has poured down from the Dublin direction, and provides a suitable soil for many calcicole species. Grass occupies 47 per cent. of the surface, crops 19 per cent.; barren mountain land no less than 24 per cent. The county is not yet by any means thoroughly explored. Much work has been done along the coast, and in the north-east, and the basin of the Ovoca River is well known; but regarding large portions of the west and south we have still very little information. There is a plethora of old records, copied from one work into another, many of them of doubtful value. Even the generalizations of the "British Association Guide," 1878, are not borne out by the facts, and have often to be discarded. But so much observation has been devoted to the more accessible and interesting parts, that few plants remain to be added to the flora.

Flora 720 species. The leading feature of the vegetation is the

occurrence of many East Coast species. The mountain flora is singularly poor, considering the elevation of the hills. *Trifolium subterraneum* and *Nitella gracilis* are not known elsewhere in Ireland. Rare or characteristic plants are numerous:—

Corydalis claviculata, 5.
Viola lutea, 5.
Trigonella ornithopodioides, 5.
Trifolium subterraneum, 1.
Trifolium scabrum, 4.
Trifolium glomeratum, 2.
Alchemilla alpina, 2.
Senecio erucifolius, 5.
Orobanche major, 5.
Lamium Galeobdolon, 3.
Scilla verna, 6.
Juncus acutus, 4.
Scirpus parvulus, 2.
Festuca uniglumis, 5.
Polypodium Dryopteris, 4.
Equisetum Moorei, 2.
Nitella gracilis, 1.

21. Dublin.

Eastern. Area 354 square miles—one of the smallest Irish counties. Maritime, with a diversified shore-line, and several islands. In the south, the northern slopes of the Leinster highlands belong to this county, forming granite hills that rise to 2473 feet in Kippure, on the Wicklow boundary. The remainder of the county is chiefly low-lying limestone, broken through in places by rugged masses of older rocks of Cambrian, Old Red, and Silurian age, which form the bold promontory of Howth, the cliff-bound island of Lambay, and other conspicuous features. The waters of the county consist of the River Liffey, which crosses from the west to enter the sea at Dublin, and the Grand and Royal Canals, the courses of which are parallel to it. There are no lakes, and no low-level bogs. A single esker-ridge occurs SW. of Dublin; other gravels of Glacial age are frequent. A low-lying county, with 62 per cent. of the surface below 250 feet elevation, and 86 per cent. below 500 feet. Grass land covers 55 per cent., crops 30 per cent. Already well explored, the county has been recently surveyed in detail by Mr. Colgan, who has supplied me with exceedingly full lists of the flora.

Flora 750 species—a total exceeded in Co. Antrim only. The East Coast group is well represented; mountain and bog plants are necessarily very few. Four plants are confined to the county:—*Sisymbrium Irio*, *Medicago sylvestris*, *Tolypella prolifera*, *Tolypella intricata*.

Rare or characteristic plants are numerous :—

[illegible] clavicula, 5.	Ligustrum vulgare, 3.
[illegible] densiflora, 4.	Scrophularia umbrosa, 2.
[illegible] brium Irio, 1.	Lamium Galeobdolon, 3.
[illegible] hirta, 5.	Atriplex farinosa, 5.
[illegible] lutea, 5.	Scilla verna, 6.
[illegible] hirsutum, 4.	Carex divisa, 2.
[illegible] ornithopodioides, 5.	Carex axillaris, 4.
Medicago sylvestris, 1.	Glyceria Borreri, 2.
[illegible] scabrum, 4.	Festuca uniglumis, 5.
[illegible] perpusillus, 3.	Elymus arenarius, 5.
[illegible] orithmoides, 5.	Tolypella prolifera, 1.
Senecio erucifolius, 5.	Tolypella intricata, 1.

22. Meath.

Eastern. Area 906 square miles. Maritime to the extent of 7 miles of sandy beach fronting the Irish sea, and 6 miles of estuarine waters at the mouth of the Boyne. Almost the whole county consists of well-drained fertile land, over drift-covered limestone. In the north, the southern extremity of the great area of Silurian rocks that characterises the NE. of Ireland projects into the county, and is accountable for the rising lands of Slieve Bregh (753 feet), and adjoining hills. The only other break in the undulating surface is found in the extreme west, where the limestone hills of Slieve-na-calliagh reach an elevation of 904 feet. Almost the entire county is drained by the Boyne and its tributaries ; in its lower reaches the Boyne is an imposing stream. The lakes of the county consist of a few small loughs in the north and west, and a slice of Lough Sheelin in the extreme west. Some of the typical Central Plain bogs put in an appearance in the west. The Royal Canal fringes the county on the south. A low-level grass country. As much as 97 per cent. of the surface is of less than 500 feet elevation ; 73 per cent. is under grass, and 20 per cent. under crops. Barren mountain land is absent, and marsh almost so. Singularly little was known of the botany of Meath until I listed its flora for the purposes of the present work ; but many plants still remain to be added, though no large portion of the surface is quite unexplored.

Flora 612 species. On the strip of shore a good many East Coast species occur. Otherwise the flora is without marked features, except perhaps for the singular rarity of plants of uplands and rough

ground, due to its low-lying and fertile nature. For instance, the Wood Anemone, the Holly, the Golden Rod, Cow-wheat, and many similar plants are still unrecorded from the county. One species—*Poa palustris*—has its only Irish station in the division.

Rare or characteristic plants :—

Hypericum hirsutum, 4.	Festuca uniglumis, 5.
Senecio erucifolius, 5.	Poa palustris, 1.
Atriplex farinosa, 5.	

23. Westmeath.

Central. Area 708 square miles. A diversified and interesting county. Though it forms the very centre of the Central Plain, and is composed of an uninterrupted sheet of Carboniferous limestone, it is nevertheless much more undulating than the counties which surround it. In the north and centre a number of hills attain to heights of 500 to 849 feet. In the west the ground is lower. The centre is further diversified by a group of large lakes—Loughs Lene, Deravaragh, Iron, Owel, and Ennel, interspersed with lakelets. This part of the county is finely wooded, and is distinctly picturesque. The western boundary is formed by the Shannon, and by its great lake-like expansion of Lough Ree, with sinuous shores and numerous islands. In the extreme north the county fronts Lough Sheelin. The only considerable river is the winding and sluggish Inny, which flows through the NW. portion to the Shannon. Bog, marsh, and esker are well represented. The Royal Canal passes right across the county. Over 99 per cent. of the surface is under 500 feet elevation. Grass occupies 65 per cent., crops 19, bog 8. The thorough work done during several years in the centre by the late Mr. Levinge has greatly enriched the county flora. The west (Lough Ree) is also interesting and well known; the remainder of the county almost unexplored.

Flora 572 species: a characteristic Central Plain flora, with some very rare bog plants, and the Shannon group appearing in the west. The rarest species are :—

Pyrola rotundifolia, 1;	Teucrium Scordium, 7;
Carex paradoxa, 1;	Chara tomentosa, 5;
Chara denudata, 1;	Nitella tenuissima, 2;

of which the first three are confined to this division.

24. Longford.

Central. Area 421 square miles. A small, flat, and rather uninteresting county. The northern third is hilly, owing to the presence of Silurian rocks, the prolongation of the Silurian area of the north-east of Ireland. The highest point is Carn Clonhugh, 912 feet. The remaining two-thirds is typical Central Plain country, level drift-covered limestone, with plenty of bog and marsh. One or two small patches of Old Red Sandstone occur. The Shannon flows along the western edge of the county, and the Inny traverses the southern extremity to join the Shannon in the great river-lake of Lough Ree, which fronts the county for many miles in the SW., with deeply indented shores and numerous islets. Several small lakes are scattered over the county, and in the NE. the greater part of the mazy Lough Gowna, the source of the Erne, lies within the boundary. Though occupying a position in the centre of Ireland, 97½ per cent. of the county is below 500 feet elevation. Grass covers 55, and crops 24 per cent. of the surface. The proportion of bog is high—12½ per cent. The only portion previously botanically explored was the south-west by Messrs. Barrington and Vowell, who have published the rarer plants of Lough Ree. Although the flora of this division does not appear rich, there is no portion which will not bear further examination.

Flora 544 species, the most interesting plants being those of the Shannon group, on the Lough Ree shores. Rare or characteristic species are few :—

Viola stagnina, 4. Teucrium Scordium, 7. Chara tomentosa, 5.

25. Roscommon.

West-central. Area 950 square miles. This is almost entirely a limestone area. In the north an undulation, where the slates and sandstones of the Old Red break through, forms the Curlew Mountains (863 feet). In the extreme north, a small part of the high Lough Allen coal-field belongs to Roscommon, rising to 1377 feet on the boundaries of Leitrim. An inlier of Devonian and Silurian rocks in the east near Strokestown forms the Slieve Bane hills (857 feet). In the centre, rich grazing lands prevail, highly uninteres-

ting to the botanist. In the south there is much poor stony country, with large bogs and numerous eskers. The entire eastern boundary is formed by the Shannon, including the whole western shore of Lough Ree. In the north is a group of beautiful lakes, of which Lough Key belongs wholly, and Loughs Arrow, Allen, and Gara partly, to Roscommon. Many smaller lakes lie in the centre and NE. The Suck, a considerable stream, bounds the county in the SW. No less than 98 per cent. of the surface is below 500 feet elevation; 59 per cent. is under grass, 20 per cent. crops, 12 per cent. turf bog. The Lough Ree shores alone had been explored when "Topographical Botany" was undertaken. Most of the county has now been roughly, but no part thoroughly examined.

Flora 544 species, of which the Lough Ree shores contribute many of the more interesting. Rare or characteristic plants very few:—

Teucrium Scordium, 7. Carex axillaris, 4. Chara tomentosa, 5.

26. Mayo East.

West-central. Area about 778 square miles. A rather bare and inhospitable stretch of limestone, broken only by a few minor patches of non-calcareous rocks. Surface generally nearly level, with much poor pasture, bog, marsh, and esker. Broad ridges rise in several places to from 700 to 850 feet, but only slightly affect the flora. In the extreme NW., the western extremity of the granite range of the Ox Mountains gives a few elevations of 1200 feet, and brings in a number of calcifuge plants. In the SW. the boundary passes through the great lakes of Mask and Corrib; the beautiful Lough Carra, which adjoins, belongs wholly to this division, and a number of small lakes also occur. There are no large rivers, the most considerable being the Moy, which drains the northern portion. Grass land covers 59 per cent. of the surface, crops 18 per cent., turf bog as much as 11 per cent.; 97 per cent. of this area is below 500 feet elevation.

The flora of this extensive area was almost unknown till Messrs. Marshall and Shoolbred published the results of their work at Clonbur. The full lists with which Mr. Marshall has supplied me have been supplemented by my own work, so that the flora is

now fairly well known, though the eastern portion is still almost unexplored.

Flora 572 species. One plant, †*Allium Schænoprasum*, is unknown elsewhere in Ireland. The rarer species are chiefly West Coast plants which extend into this division from West Mayo and Galway :—

Viola stagnina, 4.	Gentiana verna, 5.
Potentilla fruticosa, 4.	Euphrasia Salisburgensis, 6.
Saxifraga umbrosa, 11.	Habenaria intacta, 5.
Dabeocia polifolia, 3.	†Allium Schænoprasum, 1.

27. Mayo West.

Western. Area about 1336 square miles (Inishbofin excluded). A large division of strikingly wild and bold character. Maritime, facing the Atlantic on the north and west. Coast line very extensive and irregular, magnificently precipitous in places. Islands numerous and of all sizes, from Achill, the largest island on the Irish coast, down to mere rocks. Several high mountains rise in a somewhat isolated manner in this division. The Nephin Beg range (2369 feet) situated near the centre, and the Mweelrea group (2688 feet) in the extreme south, alone include more than one summit of any considerable elevation. Croagh Patrick (2510 feet) on Clew Bay, Croaghaun (2192 feet) and Slieve More (2204 feet) on Achill Island, and Nephin (2646 feet) in the east, are isolated masses of noble aspect. Almost all the mountains, and the wild coast-line, are formed of ancient metamorphic rocks, which prevail throughout the western portion; but in the east a considerable area of Carboniferous limestone extends, and as usual a lower and more fertile surface is found where it prevails. In the west many lakes lie amid vast stretches of boggy moorland; in the east are Lough Conn, a large sheet of water of no mean order of beauty, and its prolongation Lough Cullin, and in the SE. a portion of Lough Mask belongs to this division. The only considerable river is the Moy, which in its lower course flows between Mayo W. and Mayo E. Grass land and crops both much below the average, occupying only 30 and 8 per cent. respectively of the surface. Barren mountain land and turf bog are increased proportionally, occupying respectively 25 and 28 per cent. Much work has been carried out in this division

by various botanists, and the SW. and NE. portions are now well known. A great tract in Erris and Tirawley, in the north-west, requires exploration.

Flora 601 species. The only plant peculiar to the division is the critical *Ranunculus scoticus*; the most characteristic feature is the presence of several members of the Cantabrian and other western groups. Rare and characteristic plants:—

Thalictrum alpinum, 5.
Ranunculus scoticus, 1.
Poterium officinale, 4.
Saxifraga umbrosa, 11.
Erica mediterranea, 2.
Dabeocia polifolia, 3.
Euphorbia hiberna, 11.
Eriocaulon septangulare, 7.
Deschampsia alpina, 3.
Adiantum Capillus-Veneris, 6.
Isoetes echinospora, 4.

28. Sligo.

Western. Area 721 square miles. Maritime, with a sinuous coast-line chiefly of low rocks and sand. One considerable island, Inishmurray, lies a few miles off shore. A beautiful and diversified county of high botanical interest. In the north rise the remarkable flat-topped and cliff-bound limestone mountains commonly known as the Ben Bulben range (Truskmore, 2115 feet). In the west, on the opposite side of Sligo Bay, in striking contrast to these, rise the dark heathery slopes of the Ox Mountains (1778 feet) a long ridge of granitic rocks that is prolonged eastward across the county as a series of picturesque rocky hills. All the rest of the surface is Limestone Plain of the usual character, interrupted by a few terraced limestone hills (Keishcorran 1183 feet, Carrowkee 1062 feet), and in the extreme east the broad sandstone ridge of Bralieve (1498 feet), covered with thick peat-bog. Fresh water abounds. Lough Gill, lying between the limestone and the metamorphic hills, is one of the loveliest lakes in the Three Kingdoms. Lough Arrow, in the SE., is also beautiful. Lough Gara, in the extreme south, is larger than either, but bare and desolate. There are numerous small lakes. None of the rivers are of large size. Low-level bogs are rare; esker-ridges are very few. Condition of the surface nearly normal, 54 per cent. being under grass, and 17 per cent. crops. Over 8 per cent. is peat bog, and 14

per cent. mountain land. The famous flora of Ben Bulben has attracted many botanists, and the whole eastern half of the county is now well explored. Except for Mr. Colgan's work in the Ox Mountains, the barer western half (Leyny and Tireragh baronies) is still a *terra incognita*.

Flora 606 species. The dominating interest of the vegetation is the alpine flora of the Ben Bulben group of mountains. Considering the extent and variety of the coast-line, the maritime flora is poor—a feature characteristic of the west coast. Two plants are confined to this division—*Arenaria ciliata*, which has here its only British habitat, and *Saxifraga nivalis*.

Rare and characteristic species :—

Thalictrum alpinum, 5.	Polygonum viviparum, 3.
Silene acaulis, 4.	Poa alpina, 2.
Arenaria ciliata, 1.	Elymus arenarius, 5.
Saxifraga aizoides, 5.	Adiantum Capillus-Veneris, 6.
Saxifraga nivalis, 1.	Aspidium Lonchitis, 6.
Galium sylvestre, 6.	Polypodium Dryopteris, 4.

29. Leitrim.

North-western. Area 613 square miles. Almost entirely inland, having a low rocky coast line of three miles on its NW. margin. A long narrow county, cut almost in two in the middle by Lough Allen, a large lake lying among high Coal-measure hills (Slieve Anieran, 1922 feet). The northern half consists largely of table-topped cliff-walled limestone mountains (Truskmore, 2113 feet), being the eastern part of the Ben Bulben range of Sligo. The southern half is low and undulating limestone and calp country, fertile ridges alternating with bogs and numberless small lakes. The infant Shannon flows from the north through Lough Allen, and expanding as it enters level ground, forms an imposing stream along the SW. boundary, with numerous lake-like expansions. Almost equalling Lough Allen in size is Lough Melvin, lying at the northern extremity, and belonging chiefly to this county. Condition of the surface nearly normal, 58 per cent. being returned as grass land, and 20 as crops. The whole of this varied county has been more or less explored, but no part does not require further work.

Even the Leitrim side of the Ben Bulben range is not yet fully known.

Flora 533 species. The alpine plants of Ben Bulben form, as in Sligo, the most interesting feature. One of these—*Epilobium alsinefolium*—has here its only Irish station.

Rare and characteristic plants :—

Fumaria densiflora, 4.	Euphrasia Salisburgensis, 6.
Arabis petræa, 2.	Teucrium Scordium, 7.
Silene acaulis, 4.	Polygonum mite, 4.
Saxifraga aizoides, 5.	Adiantum Capillus-Veneris, 6.
Epilobium alsinefolium, 1.	Aspidium Lonchitis, 6.
Galium sylvestre, 6.	Polypodium Dryopteris, 4.

30. Cavan.

North-central. Area 746 square miles. Inland. The eastern half is formed of Silurian grits, much covered with drift. The surface here is undulating and largely tilled; it rises in Slieve Glah to 1057 feet, but this is quite an isolated hill. In the south it embosoms some large lakes (Lough Sheelin and Lough Ramor), and a multitude of small lakes are scattered over the county. Along the basin of the Erne, which flows northward across the centre through a maze of lake-like windings of marvellous intricacy, there is a good deal of Carboniferous limestone, the solution of which has produced the remarkable river-features just referred to. The long north-western arm of the county is occupied by higher grounds formed of limestone, Coal-measures, and Carboniferous sandstones, attaining to an elevation of 2188 feet in Cuilcagh. Here the Shannon has its source. Extensive low-level bogs occur, but very locally. The great eskers of the Central Plain have been left behind, in more southern latitudes. There is plenty of marsh along the Erne and around the innumerable lakelets. A fertile county, 56 per cent. being under grass, and 28 per cent. under crops. Peat bog is only 3 per cent., and mountain land the same. The flora of the centre and north-west has been tolerably well worked out; the south and east are as yet almost unknown, and the list of the flora is still quite incomplete.

Flora 500 species: as at present known, without any special

features. Rare plants very few in number, *Cardamine amara* and *Polygonum mite* being the only ones which come up to the standard used for the other divisions.

31. Louth.

Eastern. Area 316 square miles. The smallest county in Ireland. Maritime, with an extensive coast-line, which around Dundalk Bay is the flattest in the country. The southern five-sixths of the county is low and fertile, the Silurian grits being deeply covered by drift. Near Collon, on the inland border, the ground rises, forming a ridge of hills of 600 to 800 feet elevation. Northward, around Dundalk, the ground is exceedingly flat; and in glorious contrast to this plain, the north-eastern end of the county is occupied by a beautiful serrated mountain-range formed of early Tertiary igneous rocks, the highest of which (Slieve Ban, 1985 feet) overlooks the lovely lough of Carlingford, a deep inlet of the Irish Sea. The only large river is the Boyne, which forms the southern boundary of the county. Lakes are absent, excepting one or two tiny loughauns. Low-lying, 73½ per cent. of the surface being under 250 feet elevation. The area of grass land is below the average (45 per cent.); that of crops much above it (40 per cent.). Peat bog is almost absent. The county has been well explored, excepting the inland portions, where not much of novelty need be expected.

Flora 641 species—a high total, consequent on the great variety of ground which this small county yields. The maritime flora is the most characteristic feature, several of the East Coast group finding here their northern limit. Rarest species:—

Trigonella ornithopodioides, 5.	Scilla verna, 6.
Senecio erucifolius, 5.	Festuca uniglumis, 5.
Atriplex farinosa, 5.	Cryptogramme crispa, 6.

32. Monaghan.

North-central. Area 500 square miles. Inland. Surface undulating, with many low hills, small lakes, marshes, and boggy hollows. All the southern part is formed of drift-covered Silurian

slates, and has the hummocky surface characteristic of the Silurian area of the North-east. In the north there is a good deal of Carboniferous limestone, and the country is flatter. The greatest elevations occur on the NW. border, in the Slieve Beagh range (Essagalvane 1196 feet). No large rivers traverse the county, but the Ulster Canal, crossing from SW. to NE., provides a home for many hydrophytes. Peat bogs proper are almost absent. A fertile county, with a normal proportion of grass land (52 per cent.), and a large area under crops (36 per cent.). Till lately almost unexplored, and still, on account of a hitch in the field-work arrangements of the last season, one of the least known of the Irish counties. The combined lists of Mr. Waddell, Mr. Somerville, and myself, made in various parts of the county, show a deficiency of 100 to 150 species.

Flora 477 species, without any special feature. The flora approaches that of the North-eastern district in the frequency of certain local plants, chiefly calcifuge, such as *Polygonum minus* and *Potamogeton obtusifolius*. None of the species so far found in the county are particularly rare or otherwise interesting; but there is much good ground, and when the county is properly explored some rarities will probably be discovered.

33. Fermanagh.

North-western. Area 714 square miles. Inland. The whole county lies in the basin of the Erne, one of the larger rivers of Ireland, which flows down the centre of Fermanagh, expanding into the great lakes of Upper and Lower Lough Erne. The upper lake is a maze of windings among peninsulas and islands; the lower is more open, and contains a multitude of islands likewise. From the fertile lowlands of the river-basin the ground rises on either side, so that the county is rimmed with mountains. On the southern side there is a considerable area of hills of Carboniferous limestone and Coal-measures 800 to 1200 feet in height. These are dominated by the great ridge of Cuilcagh (2188 feet), on the borders of Fermanagh and Cavan. The hills on the northern and eastern side of the Erne valley are not so high, but several summits exceed

1000 feet. The valley-trough is formed chiefly in the limestone, but Old Red Sandstone prevails on the eastern shore of the lower lake. The higher lands on both sides of the lakes are largely formed of Millstone Grit. Lough Melvin and Lough Macnean, both considerable sheets of water, border the county on the west. Peat bogs are local and rare. Grass land 60 per cent., crops 24 per cent., mountain land and bog each 4 to 5 per cent. Lough Erne has been well explored by Mr. Barrington; Mr. Stewart has worked the high grounds, and Messrs. West, Tetley, and myself, have contributed lists; but the total shows that a good deal still remains to be done.

Flora 540 species, including a fair representation of most of the topographical groups. One plant, *Caltha radicans*, has on Lower Lough Erne its only Irish station. The rarest species are:—

Trollius europæus, 3.
Caltha radicans, 1.
†Galium Cruciata, 2.
Hieracium tridentatum, 2.
‡Stratiotes aloides, 3.
Carex elongata, 2.
Cryptogramme crispa, 6.

34. Donegal East.

North-western. Area 859 square miles. Maritime, with two widely separated stretches of coast. That on Donegal Bay in the south is low and often sandy. The northern coast-line, which faces the Atlantic, is magnificently bold, with softer outlines where Inishowen fronts Lough Swilly and Lough Foyle. This division is composed of heterogeneous elements, which are combined mainly for the purpose of segregating the homogeneous and more important division of Donegal West. In the south, the barony of Tirhugh presents a considerable surface of low-lying limestone, often in bare "crags." The inland barony of Raphoe is a fertile well-watered country; while in the north, Inishowen vies with Donegal West in its bleak moors and mountains (2019 feet) of metamorphic rocks. In the south, lakelets are numerous. The centre is drained by the rivers Foyle, Finn, and Swilly, the Foyle being broad and tidal. Inishowen terminates in Malin Head, the most northerly point of

Ireland. Grass land occupies 38 per cent. of the surface, crops 28 per cent., barren mountain land 24½ per cent., turf bog 7 per cent. For information concerning the flora I rely almost entirely on the "Flora of Donegal," Mr. Hart having devoted many years to working out the botany of this and the neighbouring division.

Flora 684 species, rich in many groups. Calcicole plants are necessarily restricted in range if not in numbers; light-soil species are poorly represented; the Scottish and alpine types form a noticeable feature, and the rarest plants belong chiefly to these groups:—

Trollius europæus, 3.
Corydalis claviculata, 5.
Cardamine amara, 6.
Silene acaulis, 4.
Saxifraga umbrosa, 11.
Saxifraga aizoides, 5.
Ligusticum scoticum, 5.
Hieracium argenteum, 4.
Hieracium sparsifolium, 3.
Hieracium auratum, 4.
Bartsia viscosa, 7.
Euphorbia hiberna, 11.
Salix nigricans, 3.
Elymus europæus, 5.
Equisetum pratense, 3.

35. Donegal West.

North-western. Area 1011 square miles. Maritime, with an extensive and much indented shore-line, sentinelled by numerous islands, of which Aranmore is the largest, and Tory the most outlying. This area is composed of ancient metamorphic and igneous rocks, which form a magnificent coast-line, where the Atlantic has eaten into these tough materials. The whole surface is mountainous, and the higher summits (Errigal, 2466; Muckish, 2197; Dooish, 2147; Slieve League, 1972) rise over a sea of lower hills, where gorse, heather, rock, and boggy lakelet form the leading features. A considerable area of Carboniferous limestone extends along Donegal Bay in the south. Lakelets are numerous throughout. The rivers are mostly mountain torrents. No less than 35 per cent. of the surface is barren mountain land, 32 per cent. is under grass, 14 per cent. crops, 10 per cent. turf bog.

Flora 680 species; rich in mountain plants belonging to various groups, Hibernian, Alpine, and Scottish; and poor in calcicole and light-soil species. No plant is confined to this division,

although the list of rarities is extensive. Rare and characteristic species :—

Thalictrum alpinum, 5.
Trollius europæus, 3.
Saxifraga umbrosa, 11.
Saxifraga aizoides, 5.
Carum verticillatum, 6.
Ligusticum scoticum, 5.
Hieracium argenteum, 4.
Hieracium sparsifolium, 3.
Hieracium rigidum, 2.
Hieracium auratum, 4.
Linaria repens, 5.
Orobanche rubra, 5.
Polygonum viviparum, 3.
Euphorbia hiberna, 11.
†Euphorbia amygdaloides, 3.
Eriocaulon septangulare, 7.
Carex Bœnninghausiana, 2.
Elymus arenarius, 5.
Adiantum Capillus-Veneris, 6.
Cryptogramme crispa, 6.
Aspidium Lonchitis, 6.
Equisetum pratense, 3.

36. Tyrone.

North-central. Area 1260 square miles. Inland, with a few miles of tidal water along the banks of the Foyle in the NW. A large county, with many hills and much undulating ground. The highest points lie along the northern margin (the Sperrin Mountains, Sawell 2240, Dart 2040 feet). In the centre Mullaghcarn rises to 1778 feet; and everywhere but in the east, occasional hills rise to over 1000 feet. The geology of the county is very varied. The Sperrin Mountains and a considerable area in the north are formed of metamorphic rocks. Elsewhere Old Red Sandstone, Carboniferous limestone, and volcanic rocks divide the honours, with Tertiary clays fringing Lough Neagh on the east, and small patches of Coal-measures. The Foyle and Blackwater, which bound the county on the NW. and SE. respectively, are the only rivers large enough to possess a distinctive flora. The great Lough Neagh, the largest sheet of water in the British Isles, fringes the division on the east for nearly twenty miles; the other lakes of the county are tiny. Extensive low-level bogs are found around Lough Neagh. The area of grass land is below the average—43 per cent., and the area under crops above the average—30 per cent. Turf bog is represented by 5½ per cent., mountain land by 14 per cent. Our present knowledge of the flora is almost entirely due to Miss Knowles, and is tolerably complete.

Flora 569 species, including a group of halophytes from the tidal

reaches of the Foyle. The rarest plants form a small and very mixed assemblage :—

Cardamine amara, 6.
†Teesdalia nudicaulis, 3.
Rubus Chamæmorus, 2.
Hieracium sparsifolium, 3.
Calamagrostis stricta, 4.
Pilularia globulifera, 5.

37. Armagh.

North-eastern. Area 512 square miles. Inland, touching tidal waters for a few miles along the Newry River in the SE. A small but interesting county. The south-east is mountainous, with rather isolated hills of granite and other igneous rocks, which culminate in Slieve Gullion (1893 feet). The centre and south-west are undulating and well tilled, the drift deposits overlying Silurian grits, and embosoming a number of small lakes. One broad ridge rises to 1200 feet, but most of the ground is low. In the north there is Carboniferous limestone, New Red Sandstone, Tertiary basalts, and stratified clays of the last-named period. These clays border Lough Neagh, and form the southern shore of that great lake. The country here is flat, with extensive peat-bogs and several lakes; with this exception, the northern portion of the county is very fertile. The largest river is the Bann, which flows across the NE. corner into Lough Neagh. The Blackwater and Ulster Canal run along the north-western edge of the county, and the Newry Canal forms the greater part of the eastern boundary. The most cultivated county in Ireland, over 42 per cent of the surface being under crops. Grass land occupies 45 per cent. The flora of Armagh is well-known, the older records having been supplemented in 1892 by a systematic survey by the present writer.

Flora 631 species, most of the leading groups being fairly represented; the Central Plain flora has here almost disappeared, and calcifuge plants characteristic of the north-east are abundant. *Potamogeton fluitans* is not certainly found elsewhere. Rarest species :—

Fumaria densiflora, 4.
Barbarea intermedia, 5.
(Elatine Hydropiper, 2.)
Rosa glauca, 4.
Linaria repens, 5.
Polygonum mite, 4.
Spiranthes Romanzoffiana, 3.
Potamogeton fluitans, 1.
Calamagrostis stricta, 4.

38. Down.

North-eastern. Area 957 square miles. Maritime; coast-line generally low, rocky or sandy, broken up by the large land-locked, island-studded lough of Strangford, and by the deep indentations of Belfast Lough and Carlingford Lough on the northern and southern frontiers respectively. The surface is, in general, undulating and fertile, with many small lakes and marshes lying between hillocks so steep and rounded that the appearance of the county has been likened to that of a basket of eggs. Silurian grits, often covered by a thick bed of Boulder-clay, prevail over the major part of this division, but in the centre and in the south two great protrusions of granite rise into high ranges of hills; the central one is Slieve Croob (1755 feet), the southern one the Mourne Mountains (Slieve Donard, 2796 feet, and many summits over 2000 feet). On the northern slope of the latter range the Bann has its source. Limestone is practically absent, and the small areas of Eocene basalt, New Red Sandstone, &c., have no appreciable effect on the flora. The only considerable river is the Lagan, which flows along the NW. margin. Several bogs existed in the NE., but are now almost entirely cut away. A fertile county, 43 per cent. of the surface being under grass, and 41½ per cent. under crops. Barren mountain land occupies 7 per cent. Thoroughly explored, chiefly by the industry of Mr. Stewart.

Flora 742 species—a high total, when the total absence of limestone tracts is taken into account. *Hieracium senescens* and *Zannichellia polycarpa* are unknown elsewhere in Ireland, and *Hottonia palustris* is, as a possible native, confined to Down.

Rare plants:—

Barbarea intermedia, 5.
Cardamine amara, 6.
Elatine Hydropiper, 2.
Poterium officinale, 4.
Rosa hibernica, 3.
Rosa glauca, 4.
Ligusticum scoticum, 5.
†Galium Cruciata, 2.
Hieracium senescens, 1.
Hieracium flocculosum, 2.
Hieracium argenteum, 4.
Hieracium auratum, 4.
†Hottonia palustris, 1.
Linaria repens, 5.
Atriplex farinosa, 5.
Scilla verna, 6.
Zannichellia polycarpa, 1.
Cryptogramme crispa, 6.

39. Antrim.

North-eastern. Area 1191 square miles. Maritime, with an extensive coast-line, much of which is exceedingly bold and picturesque. Antrim includes the major portion of the great Eocene lava-plateau of the north-east; and right up the centre and east of the county, from south to north, runs a broad range of high ground, rising in Trostan to 1817 feet, and maintaining over a large area an elevation of above 1000 feet. On the east and north, this plateau descends precipitously into the sea, with deep glens running inland. The western slope is more gentle, and much of the western and southern portions is low and fertile. There is a large variety of other rocks in the county, including Chalk, but most of them occur in limited quantity, and none appear to appreciably affect the flora. The western boundary is formed by Lough Neagh (half of the shores of which belong to Antrim); by Lough Beg, and by the Bann, a large river. The River Lagan, which forms part of the SE. boundary, is the only other considerable stream. Excepting those mentioned, lakes and rivers are unimportant. Bogs, high-level and low-level, are well represented. Crops occupy 34½ per cent. of the surface, grass land 48 per cent., barren mountain land 7 per cent. A varied and interesting county, which has been thoroughly explored.

Flora 777 species—the largest total of any of the Irish divisions, Dublin coming next with 750, then Down with 742 species. A varied flora, rich in rare plants. Northern and Scottish species are comparatively frequent, and Lough Neagh brings several very rare plants into the flora.

Six species are confined to this division :—

Ranunculus fluitans.	Adoxa Moschatellina.
Geranium sylvaticum.	Carex pauciflora.
Geranium pratense.	Carex Buxbaumii.

Rare plants are numerous :—

Barbarea intermedia, 5.	Poterium officinale, 4.
Cardamine amara, 6.	Rosa hibernica, 3.
Arenaria verna, 3.	Rosa glauca, 4.
Hypericum hirsutum, 4.	Saxifraga aizoides, 5.
Vicia Orobus, 4.	Carum verticillatum, 6.

Ligusticum scoticum, 5.
Hieracium flocculosum, 2.
Hieracium auratum, 4.
Pyrola secunda, 2.
Melampyrum sylvaticum, 2.
Orobanche rubra, 5.
Atriplex farinosa, 5.
Polygonum mite, 4.
Salix nigricans, 3.
Scilla verna, 6.
Calamagrostis stricta, 4.
Cryptogramme crispa, 6.
Equisetum pratense, 3.
Pilularia globulifera, 5.

40. Londonderry.

Northern. Area 816 square miles. Maritime, with a varied coast-line bordering half on the North Atlantic, half on the shallow Lough Foyle. The basaltic plateau of Antrim is continued over the eastern portion of Derry, resulting in high moors and some noble cliff-scenery in the north. In the west mica-schist and other metamorphic rocks prevail, producing much hilly ground, and rising into a high sterile mountain-chain along the SW. border (the Sperrin Mountains, 2240 feet). On the eastern border, Lough Neagh, Lough Beg, and the River Bann are the home of many good plants; the tidal waters of the Foyle on the NW. supply a habitat for others. Otherwise, lakes are unknown and rivers inconsiderable. The south-east and north-west are fertile and highly cultivated. Grass land occupies 42 per cent. of the surface, and crops 34 per cent. The area of barren mountain is 18 per cent. Botany not so thoroughly worked out as that of Down and Antrim, but still very well known.

Flora 702 species, resembling that of Antrim, but not so rich. Two species are confined to the division—*Hieracium prenanthoides* and *Hypochæris glabra*.

The rarest plants are:—

Barbarea intermedia, 5.
Cardamine amara, 6.
Silene acaulis, 4.
Arenaria verna, 3.
Rubus Chamæmorus, 2.
Poterium officinale, 4.
Rosa hibernica, 3.
Rosa glauca, 4.
Carum verticillatum, 6.
Ligusticum scoticum, 5.
Hieracium prenanthoides, 1.
Hypochæris glabra, 1.
Pyrola secunda, 2.
Melampyrum sylvaticum, 2.
Orobanche rubra, 5.
Salix nigricans, 3.
Spiranthes Romanzoffiana, 3.
Scilla verna, 6.
Calamagrostis Epigeios, 3.
Calamagrostis stricta, 4.
Cryptogramme crispa, 6.
Pilularia globulifera, 5.

The following table shows the condition of the surface of the forty Botanical Divisions as regards elevation above sea-level, and as regards physical features and agricultural operations; factors which largely influence the distribution of plants, and their relative abundance.

This table brings out a number of facts which should be borne in mind when the distribution of the Irish flora is being considered. The low-lying nature of the Central Plain appears very clearly. Thus, to take a view of the Central counties, Westmeath has 99 per cent. of its surface below 500 feet elevation, Roscommon, Longford, East Mayo, and Meath, 97 per cent. each. In high land, on the other hand, Wicklow and South Kerry stand pre-eminent, with 26 and 24 per cent., respectively, above the thousand-foot contour-line.

As regards agriculture, a marked difference will be noticed between the eastern and western counties. Dividing Ireland into Eastern, Central, and Western districts, as in Map III., it will be found that whereas an average Eastern division has 30 per cent. under crops, this figure drops to 24 per cent. in the average Central division, and in the West is only 16 per cent. Grass-land is similarly least in the West, being 49 per cent. there, while it is 53 per cent. in the East, and 57 per cent. in the Centre. Turf-bog is greatest in the Centre; and it is in the West that waste land attains its maximum.

TABLE

SHOWING THE CONDITION OF THE SURFACE OF THE BOTANICAL DIVISIONS IN PERCENTAGES OF THE AREA OF EACH.

Number and Name.	Area in square miles.	Elevation.					Present condition.						
		0—250 feet.	250—500 feet.	500–1000 feet.	1000–2000 feet.	over 2000 feet.	Crops.	Grass.	Woods.	Turf Bog.	Marsh.	Mountain.	Water, roads, &c.
1 Kerry S.	930	26·0	24·0	26·0	22·0	2·2	10·3	42·4	1·4	4·1	4·4	33·5	3·9
2 Kerry N.	923	43·0	24·0	27·0	6·0	0·3	19·2	50·9	1·2	8·0	2·1	15·0	3·6
3 Cork W.	1145	32·0	32·0	29·0	7·0	0·1	16·2	49·5	1·1	1·8	4·8	22·2	4·4
4 Cork Mid	950	21·0	35·0	38·0	7·0	—	24·8	58·0	1·6	2·1	3·2	5·3	5·0
5 Cork E.	795	32·0	40·0	27·0	1·5	—	27·6	53·8	2·4	0·2	2·8	8·7	4·5
6 Waterford . . .	721	36·5	33·0	21·5	7·9	1·4	16·8	54·4	4·3	0·4	3·3	16·7	4·1
7 Tipperary S. . . .	850	20·0	58·0	17·0	4·0	0·5	21·8	58·8	2·6	2·6	1·0	9·3	3·9
8 Limerick	1064	43·2	35·6	17·3	3·7	0·03	23·3	65·6	1·4	1·5	0·5	3·7	4·0
9 Clare	1348	61·2	23·0	14·7	1·1	—	18·3	61·1	1·0	3·3	1·1	10·6	4·6
10 Tipperary N. . . .	810	25·0	44·0	23·0	8·0	0·2	25·0	59·8	1·7	4·6	1·2	3·9	3·8
11 Kilkenny	796	28·7	40·9	29·8	0·6	—	27·3	61·7	2·0	0·6	1·0	2·8	4·6
12 Wexford	901	64·4	26·8	7·2	1·6	0·05	33·4	55·3	1·8	0·1	1·2	3·1	5·1
13 Carlow	346	28·1	51·8	15·4	4·3	0·3	32·9	54·6	1·5	0·4	1·3	4·4	4·9
14 Queen's Co. . . .	664	9·9	62·9	21·4	5·7	—	30·3	53·7	2·6	4·6	1·1	3·7	4·0
15 Galway SE. . . .	738	62·0	28·7	8·5	0·7	—	17·7	61·1	2·4	6·8	1·3	6·8	3·9
6 Galway W. . . .	826	60·0	22·0	14·0	3·5	0·6	11·2	46·9	1·7	7·2	4·4	23·8	4·8

19 Kildare	654	29·4	64·2	5·9	0·5	–	24·4	61·7	1·6	7·5	0·5	0·4	3·9
20 Wicklow	781	12·0	21·5	40·2	23·0	3·2	18·6	47·0	3·4	1·3	2·1	24·3	3·3
21 Dublin	354	62·0	23·6	7·4	6·5	0·5	29·7	54·9	1·6	—	0·2	6·1	7·5
22 Meath	906	47·0	50·0	3·0	—	—	19·3	72·7	1·7	1·5	0·4	—	4·4
23 Westmeath . . .	708	28·8	70·6	0·7	—	—	18·8	64·9	1·8	8·3	1·4	0·1	4·7
24 Longford	421	54·4	43·0	2·6	—	—	24·3	55·2	1·4	12·4	1·3	0·3	5·1
25 Roscommon . . .	950	56·6	41·5	1·8	0·1	—	20·2	58·8	1·2	11·9	1·8	1·0	5·1
26 Mayo E.	778	65·0	32·0	3·0	—	—	18·4	58·7	1·0	11·0	1·3	3·7	5·9
27 Mayo W.	1336	53·0	25·5	16·0	5·0	0·5	7·9	29·9	0·5	27·8	4·4	24·9	4·6
28 Sligo	721	23·2	58·7	12·6	5·5	—	16·6	53·7	1·6	8·4	1·8	14·3	3·6
29 Leitrim	613	41·3	34·2	15·3	9·0	—	20·1	58·2	0·9	5·4	1·1	8·0	6·3
30 Cavan	746	33·8	45·8	16·5	4·0	0·02	27·9	56·1	1·1	3·0	0·8	3·2	7·9
31 Louth	316	73·5	17·0	5·7	3·8	—	39·8	44·9	2·2	0·4	0·8	6·6	5·3
32 Monaghan	500	29·3	50·4	19·6	0·7	—	36·3	52·2	1·3	1·9	0·4	0·3	7·6
33 Fermanagh . . .	714	44·6	33·7	18·9	2·8	—	23·7	59·6	1·4	4·3	0·4	4·9	5·7
34 Donegal E. . . .	859	34·5	32·5	29·0	4·0	0·05	22·7	38·0	0·5	6·9	2·0	24·4	5·5
35 Donegal W. . . .	1011	34·0	28·0	29·0	9·0	0·2	14·0	32·1	0·5	10·3	3·0	35·3	4·8
36 Tyrone	1260	23·0	39·1	33·1	4·7	0·04	30·3	43·0	1·2	5·5	1·0	14·2	4·8
37 Armagh	512	47·5	30·3	21·1	1·3	—	42·3	45·2	1·0	2·1	0·8	2·4	6·2
38 Down	957	49·2	34·7	10·9	4·8	0·3	41·5	43·1	2·1	0·3	0·7	6·9	5·4
39 Antrim	1191	36·8	30·5	24·6	8·0	—	34·5	48·3	0·8	3·3	0·9	7·0	5·2
40 Derry	816	42·2	26·9	23·5	7·3	0·3	34·2	41·6	0·9	4·7	0·6	13·2	4·8
All Ireland	32,524	40·7	36·6	17·8	4·9	0·02	22·8	52·1	1·5	5·9	1·9	11·1	4·7

NOTE.—The percentages of elevation for Cork, Kerry, Tipperary, Galway, Mayo, and Donegal are approximate.

IV.—THE FIELD-WORK.

If smaller things may be compared to greater, it may be pointed out that a wide difference exists between the method of compilation of the Irish county-lists and that employed in the corresponding work dealing with Great Britain. Watson compiled his "Topographical Botany" from a mass of material, the labour of many botanists, already in his hands, and the author's work consisted in the sorting and arrangement of this matter; whereas in the present case the bulk of the compiler's task lay in the creation of the necessary records by means of systematic field-work. As the field-work thus carried out constitutes the most extended botanical survey yet made in Ireland, some notes on the circumstances under which it was undertaken, and the means employed in its execution, may be of interest.

The state of knowledge as regards county-lists in 1895, when I projected "Irish Topographical Botany," may be summarized as follows:—

A.—Flora well known (say, not less than 400 species):—

Division.	Chief Sources of Information.
3 Cork West	Allin's Flora (1883).
9 Clare	Papers by Foot, Hart, Stewart, Corry, &c.
20 Wicklow	Brit. Assoc. Guide (1878).
21 Dublin	B.A. Guide (1878); Hart's "Howth" and "Lambay."
33 Fermanagh	Papers by Barrington & Vowell, and Stewart.
34 Donegal East	Hart's Papers, and Flora (in press).
35 Donegal West	
37 Armagh	Praeger's Flora (1893).
38 Down	Stewart & Corry's Flora (1888) and Supplement to same (1895).
39 Antrim	
40 Derry	

B.—Flora partially known (say, 200 to 400 species):—

Division.	Chief Sources of Information.
1 Kerry South	Papers by Hart, Barrington, Scully, &c.
2 Kerry North	,, Hart, Stewart, Scully, &c.
12 Wexford	,, Hart, Barrett-Hamilton & Moffat, &c.
16 Galway West	,, Babington, More, Hart, &c.
23 Westmeath	,, Barrington & Vowell, Levinge.
28 Sligo	,, Corry, Barrington & Vowell.
29 Leitrim	,, Stewart, Barrington & Vowell.

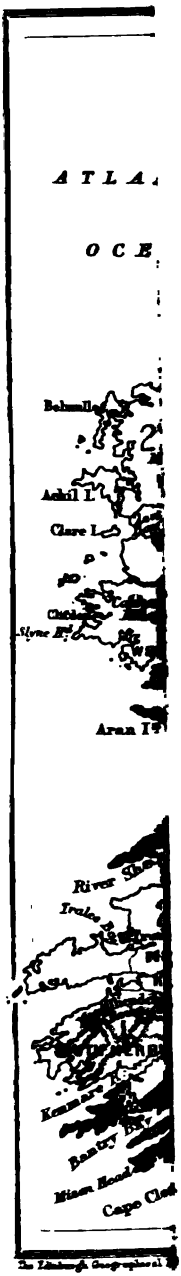
C.—Of the remaining 22 divisions, 100 species per division would have been a high estimate of the average number of plant-records available. Of some of these divisions, such as North-east Galway, King's County, Meath, East Mayo, and Monaghan, the flora was almost totally unknown.

Again, the flora of an average Irish county-division might be reckoned at 600 to 700 species. Of these, say 100 would be rare or local species, few of which one could hope to meet in the course of a rough and hasty survey such as alone it would be possible to carry out, considering the many divisions to be explored, and the small number of workers. Thus 500 to 600 species per division was left as the available maximum to be aimed at, and I felt that publication might be undertaken if a minimum of 500 species per division could be shown—Watson published "Topographical Botany" when for nine vice-counties no information was available but scattered notes of rarer plants.

Out of 20,000 county-records required (500 species in 40 divisions), it appeared from the summary given above that about 8000 were available in 1895, leaving about 12,000 to be got together by means of field-work. In addition, it was desirable that many old records which were included in these 8000 should be replaced by others of recent date; so that 15,000 might be taken as the number of new records required to make the county-lists reasonably complete and up-to-date. Dr. Scully had been in recent years working out the distribution of plants in Kerry (divisions 1 and 2), Mr. Phillips in Cork (3, 4, and 5), and Mr. Colgan in Dublin (21), and from these six divisions there was therefore hope of obtaining full lists of recent date. For myself, I was willing to devote my holidays for five years to the work, which, taking 40 days per annum as the available total, would give 200 days field-work. Careful consideration showed that, with the assistance which I might hope to receive in other directions, there was reason to think that the end of five years might see the stipulated 500 species on record for each of the 40 divisions. The sequel has shown that these expectations were well founded. Only one county (Monaghan, 477 species) falls below the stipulated 500, and that on account of an accident; while the average number of plants now recorded for the 40 divisions is 628

It may be remarked here that the field-work necessarily included the re-survey of certain areas, the flora of which had been already examined and published. In some botanical reports the question of county-distribution had not entered into the author's consideration, and the information given did not definitely state in which of two or more counties many plants were found. In other cases, the rarer plants only were published; and as the occurrence of commoner ones could not be assumed, the ground had to be gone over again for the completion of the lists of species. Every effort was made to utilize published material to the full, and Mr. Stewart and Mr. Hart were particularly helpful in annotating their various papers to allow of each record being allocated to its proper topographical division; but in other cases such information was not now obtainable, and certain records had, for the present, to be laid aside as indefinite.

It has been particularly gratifying to me that the one doubtful item in the calculations—viz. the amount of assistance that I might receive from botanists not at that time working at the flora of any portion in Ireland—has proved to be under-estimated; the generous aid that I received, sometimes from quite unexpected quarters, was the pleasantest feature of the five years harvesting, and much lightened my own labours in the field. The accompanying maps will convey a good idea of the progress of the field-work. The same facts, with the area of each observer's operations, are shown in detail in the following table, in which the relative extent of the lists compiled by the explorers referred to is shown roughly by the letters appended to their names. **C** signifies incomplete lists of the rarer plants, or general lists of not over, say, 100 species. The letter **B** is used for more complete lists of rarer plants, or for general lists of not over, say, 300 plants. **A** signifies good county lists—say from 400 to 700 species.


ATLA
OCE
Achill I.
Clare I.
Slyne Hd
Aran I.
River
Irales
Kenmare
Bantry
Bloody Foreland
Cape Clear

Division.	Principal Lists available in 1895.	Principal Work done or made available during 1896–1900.
1 Kerry South .	Barrington (B). Hart (B). Scully (B).	Scully (A). Praeger (B).
2 Kerry North .	Scully (B). Stewart (C),	Scully (A).
3 Cork West .	Power (C). Allin (A), .	Phillips (A).
4 Cork Mid . .	Power (B). Allin (B), .	Phillips (A).
5. Cork East .	Power (B). Allin (B), .	Phillips (A).
6 Waterford .	Hart (B), . . .	Flemyng (B). Phillips (C). Praeger (A).
7 Tipperary S. .	Hart (C), . . .	Praeger (A). Phillips (B).
8 Limerick . .	Stewart (B), . . .	Limerick Field Club (B). Somerville (A). Praeger (A).
9 Clare . .	Foot (B). Hart (A). Corry (B). Stewart (B). Colgan (B). Praeger (A).	Colgan (B). Miss Knowles (A).
10 Tipperary N. .	Hart (C), . . .	Colgan (B). Praeger (A). Phillips (B).
11 Kilkenny . .	Hart (C), . . .	Phillips (B). Praeger (A).
12 Wexford . .	Hart (B). Moffat (C). B.-Hamilton & Glascott (C). B.-Hamilton & Moffat (C).	Marshall (A). Praeger (B).
13 Carlow . .	Hart (C), . . .	Praeger (A).
14 Queen's Co. .	Hart (C), . . .	Phillips (C). Praeger (A).
15 Galway SE. .	More (B), . . .	Mrs. Joyce (B). Colgan (B). Praeger (A).
16 Galway West .	Babington (C). More (A). Hart (B). Marshall & Shoolbred (A).	Marshall (B). Colgan (B). Praeger (A).
17 Galway NE. .	. . . . .	Phillips (C). Praeger (A).
18 King's Co. .	Hart (C), . . .	Praeger (A).
19 Kildare . .	. . . . .	Praeger (A).
20 Wicklow . .	*Brit. Assoc. Guide* (A). Praeger (A).	Praeger (A).

Division.	Principal Lists available in 1895.	Principal Work done or made available during 1896–1900.
21 DUBLIN . .	*Brit. Assoc. Guide* (A). Hart (A). Praeger (A).	Colgan (A). Praeger (A).
22 MEATH . .	. . . . .	Praeger (A).
23 WESTMEATH .	Barrington & Vowell (B). Levinge (B).	Linton (C). Carr (B). Praeger (A).
24 LONGFORD . .	Barrington & Vowell (C),	Praeger (A).
25 ROSCOMMON .	Stewart (B). Barrington & Vowell (B).	Praeger (A).
26 MAYO EAST .	Marshall & Shoolbred (A),	Mrs. Persse (B). Marshall (B). Praeger (A).
27 MAYO WEST .	Babington (C). Hart (C),	Marshall (A). Praeger (A). Colgan (C).
28 SLIGO . .	Corry (C). Barrington & Vowell (B).	Colgan (B). Praeger (A).
29 LEITRIM . .	Barrington & Vowell (B). Stewart (B).	Somerville (B). Praeger (A).
30 CAVAN . .	Stewart (B), . . .	Somerville (B). Praeger (A).
31 LOUTH . .	Hart (C), . . .	Praeger (A).
32 MONAGHAN .	. . . . .	Somerville (B). Waddell (B). Praeger (B).
33 FERMANAGH .	Barrington (A), . .	West & Tetley (A). Praeger (A).
34 DONEGAL EAST .	Hart (B), . . .	Hart's *Flora* (A).
35 DONEGAL WEST .	Hart (B), . . .	Hart's *Flora* (A).
36 TYRONE . .	. . . . .	Miss Knowles (A).
37 ARMAGH . .	More (A). Praeger (A),	. . . . .
38 DOWN . .	Stewart & Corry (A). Stewart & Praeger (A).	. . . . .
39 ANTRIM . .	Stewart & Corry (A). Stewart & Praeger (A).	Miss Knowles (A). Praeger (B).
40 LONDONDERRY .	Stewart & Corry (A). Stewart & Praeger (A).	Mrs. Leebody (A).

The valuable assistance which I received in working up the county floras will be evident from the right-hand column in the foregoing list. To summarize this, I may say that the preparation of lists for the following divisions was entirely taken off my hands by the botanists named :—

1 Kerry S.	R. W. Scully.	21 Dublin	N. Colgan.
2 Kerry N.		9 Clare	Miss Knowles.
3 Cork W.	R. A. Phillips.	36 Tyrone	
4 Cork Mid		39 Antrim	
5 Cork E.		40 L'derry	Mrs. Leebody.

In addition to the above, the following divisions were well worked since 1895, not directly on account of "Irish Topographical Botany"; but in each case the full results were generously placed at my disposal.

8 Limerick	Limerick Field Club.	16 Galw. W.	E. S. Marshall and W. A. Shoolbred.
12 Wexford	E. S. Marshall.	26 Mayo E.	
27 Mayo W.			

Paying due regard to the information already available in 1895, and to the work in progress during the five-year period, 1896-1900, as shown above, my own work was divided between the various county-divisions as follows :—

6 Waterford,	7 days.	22 Meath,	13 days.
7 Tipp. S.,	7 ,,	23 Westmeath,	5 ,,
8 Limerick,	3 ,,	24 Longford,	8 ,,
10 Tipp. N.,	8 ,,	25 Roscommon,	12 ,,
11 Kilkenny,	7 ,,	26 Mayo E.,	4 ,,
12 Wexford,	2 ,,	27 Mayo W.,	4 ,,
13 Carlow,	8 ,,	28 Sligo,	9 ,,
14 Queen's,	10 ,,	29 Leitrim,	8 ,,
15 Galway SE.,	13 ,,	30 Cavan,	7 ,,
16 Galway W.,	6 ,,	31 Louth,	8 ,,
17 Galway NE.,	12 ,,	32 Monaghan,	3 ,,
18 King's,	8 ,,	33 Fermanagh,	4 ,,
19 Kildare,	9 ,,		
20 Wicklow,	5 ,,	Total,	190

In addition, about ten days were spent in field-work in other divisions which circumstances led me to visit. In all, I spent just

the estimated 200 days in the field working up county-lists for use in the present compilation. The conditions which governed the distribution of this field-work were somewhat complicated. First, an estimate in 1895 of the state of advancement of all the county-lists, reckoning both all work then in existence and work likely to be done by others, gave me the relative number of days that ought to be devoted to exploring each division. Then the total number of days which I could hope to devote to the work during the five years had to be distributed among the divisions in these proportions. The number of days to be spent in each division being thus determined, attention had again to be directed to the work already done, and a note made of the portions of each division already worked, so that unexplored regions should have preference. Then care had to be taken in planning expeditions that every kind of ground should be worked, so that mountain and stream, bog, marsh, sea-shore, lake, wood, esker-ridge, should all yield their quota to the flora; and the dates of visits had to be planned so that the plants neither of early spring, of summer, nor of autumn, should escape notice. Lastly came the dove-tailing of the various expeditions, so that the above conditions should be fulfilled without any unnecessary time being spent in travelling. Fortunately, the most remote parts of the country—Cork and Kerry, Donegal, Derry and Antrim, were to be reckoned among those the flora of which had previously been worked out, or was already in capable hands. Still the area to be explored was sufficiently extensive, stretching from Wexford and Louth westward to Connemara and Sligo, and from Waterford and South Tipperary northward to Fermanagh. The portions of the country which had been previously examined were naturally the more interesting districts—the extreme South-west, Burren, Connemara, the Ben Bulben district, Donegal, Antrim, Dublin, and Wicklow: also the principal mountain-groups, lakes, and rivers—in fact, almost all the places to which the botanist would naturally turn his steps. Likewise, it was the rarer and more interesting species to which attention had chiefly been directed. In consequence, much of my work lay in the little-known Central Plain, and among plants which do not possess the fascination that pertains to the Cantabrian group or to the alpine flora. In some ways this restriction was beneficial,

as it led to the exploration of many districts which might have long remained unvisited by the botanist, and to the finding of a number of interesting plants which otherwise might for years to come have escaped detection. My field-work, indeed, proved exceedingly interesting, and it has left behind the pleasantest of recollections. The long summer days spent in the Limestone Plain, where the gentle undulations of the ground only occasionally hid the distant rim of brown and blue hills; the marshy meadows, heavy with the scent of flowers; the great brown bogs, where the curlews alone relieved the loneliness; the bare limestone pavements and gaunt grey hills of Clare and Galway; the savage cliffs of the Mayo coast; the flower-filled sand-dunes which fringe the Irish Sea; the fertile undulations of southern Ulster; the swift brown current of the Barrow; the fretted limestone shores of the great western lakes; the towering cones of the Galtees: all have left memories that can never be effaced.

Any account of the botanical excursions of the last five years would be out of place here, but brief narratives of the field-work of 1897, 1898, 1899, and 1900 will be found in the pages of the "Irish Naturalist."[1] Ireland is a delightful country for the pursuit of work in the field. Enclosed or preserved ground is but seldom met with, and the country is free and open. Few rivers but can be forded; few marshes or bogs but can be crossed; few precipices but yield their treasures to the mountaineer; few spots are so remote but they may be visited in a good day's walking from the nearest stopping-place.

As regards methods employed in the field-work, there is little to be said. With a large vasculum, a "London Catalogue," and the one-inch hill-shaded Ordnance Survey map as my constant companions, progress was smooth and rapid. In marking the catalogues, letters were used to signify not only localities, but the dates on which the localities were visited. Thus, if a place was visited twice, a different letter would be used on the second occasion; and the particulars relating to any plant could thus at any future time be determined

[1] Vol. VII. 87–103, IX. 135–149, 224–229, X. 29–41.

by means of a key-list of letters and their equivalents at the beginning of the catalogue. A separate catalogue was used for each division. So far as possible, specimens were dried of all plants that could not be named in the field; but on account of the number of plants collected, and the amount of ground covered, it was soon found impossible to collect *Rubi* and other bulky specimens. The Willows suffered from the same cause, and on account of the impossibility of revisiting places at different times of year. My hasty surveys were likewise insufficient for the working out of the distribution of critical forms: our knowledge of such plants can only be acquired by slow and patient observation. In certain groups, however, notably *Characeæ*, large collections were made, which have much extended our knowledge of their range in the country.

In the case of each division, it was found advantageous, when about three days' work had been carried out, to form, from the marked catalogue, a desiderata-list of all common plants not yet seen, and to keep this list prominently in view; otherwise there was a danger that even conspicuous plants of universal occurrence might escape being noted. The number of days devoted to each division was, as has been already stated, determined by the amount of work done in each by previous observers, and the first four years' work was carried out according to this estimate. At the end of the fourth year, a table of distribution was constructed for the whole flora in the forty divisions, including both my own and previous work. From this table desiderata-lists were formed for each division, of all yet unrecorded plants likely to occur in each, and the last season's work was distributed among the divisions in proportion to the length of these lists.

In estimating the time devoted to each division, six hours or more in the field was reckoned as a "day"; less than six hours as a half-day. The ordinary "day," however, consisted of twelve hours —8.30 a.m. to 8.30 p.m.—and the walking distance covered per day averaged 20 to 25 miles, with a minimum of about 15, and a maximum of 35. Anything over a 25-mile day, however, generally meant a steady tramp as the beginning or end of the day's work.

The rate of growth of the county lists is a rather interesting

point. Two typical cases from my catalogues may be quoted; Kilkenny and Carlow may be taken as average inland counties[1]:—

11 KILKENNY.

First day, .	May 19, 1897.	About Kilkenny,	244	species	
Second ,, .	July 30, 1898.	Thomastown,	135	,,	additional
Third ,, .	,, 31, ,,	L. Cullin and R. Suir,	70	,,	,,
Fourth ,, .	Aug. 1, ,,	Inistioge and Graigue,	37	,,	,,
Fifth ,, .	,, 2, ,,	Urlingford,	22	,,	,,

Total for 5 days work, 508 species.

18 CARLOW

First day, .	May 18, 1897.	Bagenalstown,	251	species	
Second ,, .	Aug. 9, 1898.	Carlow and Milford,	133	,,	additional
Third ,, .	,, 10, ,,	Borris and Mt. Leinster,	48	,,	,,
Fourth ,, .	,, 11, ,,	St. Mullin's and Graigue,	29	,,	,,
Fifth ,, .	June 4, 1899.	Tullow,	27	,,	,,

Total for 5 days work, 488 species.

The largest number of species noted in a single day's work in any of the inland counties was between 370 and 380; this figure was reached in North Tipperary within a 5-mile radius west and south of Portumna, and again in Westmeath, within 5 miles north and east of Athlone. In each case there was a varied combination of river and lake, bog and marsh, but no maritime or mountain plants. One day spent in the Carlingford district, where there is a delightful variety of sea-shore, mountain, and fertile ground, yielded a list of over 400 species.

It only remains to add that a large amount of detailed notes, referring to the greater number of the divisions, is left unpublished. The word "frequent," so often appended to my own records, signifies a number of further records, localized and dated; and indirectly often some scores of miles of country explored. The material on which the records of most of the rare or critical species are based will be found in the National Museum, to the extent of some 5000 sheets of specimens, the critical plants named by recognised authorities; the bulk of the notes remains in my own hands, and is at the disposal of any fellow-botanist engaged in working up the flora of any district or the distribution of any group of plants.

[1] The flora of an average maritime division is larger b 40 to 50 species than that of an inland division.

V. THE COUNTY RECORDS.

General explanations.—In the succeeding pages, under each of the rarer species a list is given of the divisions in which it is known to occur. In the notes which follow the name of each division, an attempt is made to combine a definite record, on which the inclusion of the plant in the county-flora may be based, with such further information as is available regarding the frequency and distribution of the species in the division. In the case of those divisions of which the flora is well known (or, what comes to the same thing, in the case of the plants the distribution of which in the divisions is well known), the plan followed is to give (1) the latest localized and dated record, with authority; and (2) a brief indication of the frequency or distribution of the species in the division. Where the information concerning both points is drawn from the same source these two notes are usually combined. In a large number of cases our knowledge of plant-distribution in the divisions is not sufficient to warrant generalizations such as "frequent," "rare," "confined to the north," and so on. In such instances all the stations which are known are given, or else an indication of where they will be found, as material towards the fuller knowledge which will eventually allow of such generalizations being made, when the county-floras shall have been better worked out. Where these additional stations are, some of them published, others unpublished, and where space does not permit of the full citing of authorities, fuller information is given regarding the latter, as the source of, and authority for, the former is easily discoverable from "Cybele" or elsewhere. In all cases, the object is to convey the fullest and latest information possible within the very narrow limits available—generally three-quarters of a line of type.

In the consistent use of *latest* records, this work exhibits a departure from the practice usually followed in Floras, and other treatises on local plant-distribution. In the present case, the whole object is to exhibit a view of the flora of Ireland *as it is*; to give a present-day census of the plants of the country. This being so, where one localized and authenticated record has to be selected, the *latest* is clearly the one which should have preference. The objec-

tion to the plan is purely a personal one. It may be urged that, by this method, the original finder of a plant is ignored, the credit of discovery taken from its rightful owner, and the historical and biographical interest of Irish botany seriously impaired. The reply is that the plan of this work, as deliberately thought out, requires that the *latest* information respecting each species should be given; that names of persons are here published, not with any reference to original discovery, but simply as vouchers for the records; and that the historical element, and the claims of first discoverers, are so fully and excellently dealt with in the second edition of "Cybele Hibernica," as to render unnecessary their republication, and to justify the mode of treatment here adopted. In "Cybele," the first and subsequent discoveries of each rare plant are accurately and sympathetically traced, and the most captious field-botanist will find himself fully credited with whatever "new records" he may claim to have made. In the present work, the personal name attached to a station is not claimed to represent more than the latest passer-by who published, or favoured the compiler with a note of his having seen, the plant in the station quoted. For my own records, at least, I claim no more than this; and on account of the large amount of field-work which I have carried out during the last five years, in order to make the county lists complete, my name occurs with a frequency which I would willingly have avoided.

The first portion of each line, then, following on the number and name of the division, gives the latest satisfactory record of the occurrence of the plant in the division, with locality, authority, and date. The second portion (where a full stop or colon intervenes) gives, in the briefest possible terms, a general indication of the distribution or frequency of the plant in the division.

Each record or note consists of two parts, separated by a dash—(1) the LOCALITY or other topographical or distributional item, with the year, when obtainable, in which the observation was made; and (2) the AUTHORITY for the record or note, giving the person's name, or the reference or reference number showing the source of information, and also the date of publication or transmission of the note in cases where the date of observation is not obtainable. Thus "Dundalk '99—A." signifies that A. found the plant at Dundalk in 1899.

"Dundalk—A. '99" signifies that A. stated in 1899 that he had found the plant at Dundalk. "Dundalk—A. '99 *136*" signifies that A., in the paper numbered 136 in the Bibliography which succeeds, and published in 1899, has stated that he found the plant at Dundalk. Such expressions as "C. throughout '99—A.," "f. in the north—A. *374*," &c., are to be similarly translated, "c." and "f." in these cases standing as usual for "common" and "frequent." In the case of well-known books, the abbreviated title of the book is quoted, as this is shorter than the name of the author and the reference number, and more explicit. Where "Cybele," editions I. and II., "Flora of the North-east of Ireland," and "Flora of Donegal" are quoted, the dates of publication are omitted, even where the date of finding of the plant is unknown, as these dates are well-known land-marks in the field of Irish botany. In all cases where no authority is appended to the note on distribution, it signifies that the note is framed on the collective testimony of several observers. The absence of a reference number after a personal name in all cases signifies that the information was supplied direct by the person named to the compiler. Such original material has been largely used in preference to published papers embodying the same observations, the information given in the former being generally fuller and more accurate.

Again, where information is easily available, as in the published county Floras, the notes given herein are of a more general character —as in the case of Donegal and the north-eastern divisions. The same applies to those divisions (Dublin, Cork, Kerry) of which county Floras are in preparation. In the case of the remaining less known divisions, the desirability of making the information as detailed as possible, as a foundation for further work, has been kept in view. Where the authorities for localities quoted are omitted for lack of space, the records thus curtailed are those which have been published in accessible books.

Explanation of Details.

Headings.—As stated in the preface, the order of the species, and their nomenclature, are identical with the order and nomen-

clature of "Cybele Hibernica." As explained in the same place, hybrids and varieties are omitted. An exception, however, is made in the varieties of certain critical plants, such as *Ranunculi*, *Rubi*, *Rosæ*, *Hieracia*, on account of the instability of the grouping of these forms. Alien plants naturalized in only one locality are usually omitted, such as *Valerianella carinata*, *Artemisia Stelleriana*, *Senecio viscosus*, *Cineraria maritima*, *Mentha Requienii*, *Polygonum sagittifolium*, *Sisyrinchium californicum*, since their present claim to admission to the flora may depend on local and temporary influences. A few plants now generally considered hybrids, such as *Rosa hibernica*, *Rosa involuta*, *Potamogeton Zizii*, and *Carex axillaris*, are admitted because their hybrid origin is not yet proved beyond doubt, and their familiar names would be missed in a list of Irish plants.

Clarendon type is used for species, italic type for plants which are considered as sub-species, and not reckoned separately in the statistics, &c., as already explained.

The signs *, ‡, †, are used in their ordinary significance of certainly, probably, or possibly introduced. Where prefixed to the name of a species, they refer to its general standing in Ireland, and where similar marks are not prefixed to the division-records, they may be held to govern all of these.

Census numbers.—The census line, succeeding that which contains the name of a plant, shows (1) the total number of divisions in which it occurs, and (2) its distribution according to a tripartite division of Ireland into East, Centre, and West. This tripartite division is shown on Map III. The Eastern group consists of 15 divisions, the Centre of 13, the West of 12; the three are of approximately equal area, namely:—Eastern division 10,996 square miles, Centre 10,237 square miles, Western division 11,290 square miles. The dividing lines in north and south between the Eastern and Western groups represent the natural meeting-ground of the characteristic east coast and west coast floras, though, of course, the two overlap to a certain extent. The numbers in the list of divisions which succeeds the census-line give at a glance a rough idea of the north and south distribution of a plant, accordingly as they are mostly tens or twenties or thirties; Map III. shows the significance of

such a classification by means of lines defining the area included in divisions 1–10, 11–20, 21–30, 31–40. Thus it will be seen that a glance along the census-line and down the list of division-numbers will at once give the key to the distribution of any species in Ireland.

List of divisions.—The order in which the divisions are enumerated has already been explained; the longer names are contracted in a way which will be easily intelligible. The inclusion of a division and its accompanying record in parenthesis signifies either that the plant is believed to be now extinct in the division, or that, in comparison with other records, its occurrence in the division has little phyto-geographical importance, on account of probable introduction or non-permanency. Parenthesis accompanied by a note of interrogation signifies a doubt as to the occurrence of the plant at all, and implies possible or probable error.

The records.—The general plan has been explained above. The signs *, ‡, †, are used as already noted. When a plant, possibly or probably introduced in Ireland, varies in standing according to the authorities quoted, these signs are often attached to the different stations, and signify the opinion of the person whose name is appended to the record. In such cases, the absence of one of the qualifying signs does not necessarily imply that the finder considered the plant native, but only that he did not attach a qualifying sign.

The note of exclamation (!) signifies as usual that the record is backed by the personal knowledge of the compiler. When prefixed to the name of a *place* it implies that I have seen the plant growing in the station mentioned; when prefixed to the name of a *person* or *herbarium* it means that a specimen from the spot named has been examined (or in the case of a critical plant, submitted by me to an authority).

Square brackets in all cases signify editorial additions. Where the recorder of a plant is a person different from the finder, the name of the latter is printed in parenthesis. When the name of a book is given as the authority, this is not resorted to, as no confusion of names is then probable.

Italic type is used for the reference numbers of papers, &c., as they appear in the Bibliography; for the names of books; and for

such other contracted words, such as *Hb.* or *MS.*, not being names of persons, which form part of the authority for a record. In the case of the commoner plants, where only a general statement is given regarding their distribution, italic type is used in a negative sense, to emphasize the names of those divisions in which the plant has *not* yet been found.

The use of the words "rare," "frequent," &c., invariably implies the existence of records additional to those which are given. Conversely, the absence of such words may be taken to imply that no stations are known to the compiler beyond those which are quoted. Similarly, the expression "in the north and south" implies absence of the plant from the middle portion of the area under consideration; and the term "frequent in the west" signifies, in the absence of other information, that the plant is, as at present known, *confined* to the west, where it is frequent. "North to south" implies an absence of records from the eastern and western portions.

Names of places.—It has frequently been necessary to curtail the description of localities in published records: the name of a place must generally be held to imply "at or near." When place-names are not quoted from published records, an attempt has been made to use names which will be found in Philips' "County Atlas of Ireland" and the index thereto, in order to facilitate reference.

Names of persons.—Surnames alone are given, except in cases where more than one person of the same surname are mentioned. Titles and prefixes are generally omitted, except "Miss" and "Mrs." The full names will be found in the majority of cases in the Bibliography, or in the list of contributors in the preface. The author's name has been contracted to the letter "P."

Contractions.—The following is a general list of contractions employed:—

NAMES OF AUTHORS:—

B. & G.	G. E. H. Barrett-Hamilton and Miss L. S. Glascott.
B. & M.	Do. and C. B. Moffat.
B. & M. *MS.*	Do. do. MS. material towards a flora of Co. Wexford.
B. & V.	R. M. Barrington and R. P. Vowell.
M. & S.	Rev. E. S. Marshall and Dr. W. A. Shoolbred.
S. & P.	S. A. Stewart and R. Ll. Praeger.
P.	R. Ll. Praeger.

NAMES OF BOOKS :—

Cyb. I.	Cybele Hibernica, ed. I. 1866.
Cyb. II.	do., ed. II. 1898.
Fl. Don.	Hart: Flora of Donegal. 1898.
Fl. NE.	Stewart and Corry: Flora of the North-east of Ireland. 1888.
Fl. Howth.	Hart: Flora of Howth. 1887.
Fl. Ulst.	Dickie: Flora of Ulster. 1864.
Fl. Belfast.	Tate: Flora Belfastiensis. 1863.
Fl. Hib.	Mackay: Flora Hibernica. 1836.
Guide '78.	M'Alister and M'Nab: Guide to the County of Dublin. 1878.
Ir. Fl.	The Irish Flora. 1833.
Allin *Fl.*	Allin: The Flowering Plants and Ferns of the County Cork. 1883.
Power *Fl.*	Power: Botanist's Guide to the County of Cork. 1845.

SOCIETIES, HERBARIA, &c. :—

B.E.C.	Botanical Exchange Club of the British Isles: *Report.*
B.N.F.C.	Belfast Naturalists' Field Club *Proceedings.*
C.N.F.C.	Cork Naturalists' Field Club.
D.N.F.C.	Dublin Naturalists' Field Club.
Hb. Glasnevin.	Herbarium of the Royal Botanic Gardens, Glasnevin.
Hb. L.F.C.	Limerick Field Club Herbarium.
Hb. S. & A. M.	Science and Art Museum Herbarium.
L.F.C.	Limerick Field Club.
W.B.E.C.	Watson Botanical Exchange Club: *Report.*

MISCELLANEA :—

Br.	Bridge.	c.	common.
Hb.	Herbarium.	f.	frequent.
Hbr.	Harbour.	r.	rare.
Hd.	Head.	v.	very.
I.	Island.	Mt.	Mount.
Jnct.	Junction.	Mtn.	Mountain.
L.	Lake or Lough.	R.	River.

N., S., E., W., and combinations. North, south, &c.

Punctuation.—The use of the dash, as separating the *record* from the *authority*, has already been explained. Stops are employed as little as possible, to save space. The comma separates different stations given on the same authority: elsewhere it is

employed only where clearness requires. The colon separates the definite record from the general remark, where these are given on the same authority; and the terms "rare," "frequent," &c., following a colon apply not to the station which may precede the colon, but to the whole division.

VI. BIBLIOGRAPHY.

Principal materials used in compiling the county-lists.—It may be useful to indicate the sources, published and unpublished, from which the information contained in the body of the work is mainly drawn. Remembering that the *latest* records are those selected, it follows that some important papers do not appear in the present list, the particulars contained in them having been superseded by more recent or more full information. For each division it is possible to list here only the principal sources: needless to say the whole body of Irish botanical literature and much unpublished material were duly utilized. Abridged titles are used for published papers, with references by number to their entries in the Bibliography. In the case of unpublished material, an indication is given of the extent of each list.

1. Kerry South.

1881.	Barrington: Blaskets (*107*).
1882.	Hart: Macgillicuddy's Reeks (*373*).
1884.	,, : Mountain-ranges of Ireland (*381*).
1888–1900.	Scully: list of 690 species.
1898.	Praeger: list of 300 species.

2. Kerry North.

1888–1900.	Scully: list of 640 species.
1891.	Stewart: South Clare and Shannon (*863*).

3. Cork West.

1883.	Allin: Flora (*19*).
1889–1900.	Phillips: list of 750 species.[1]

4. Cork Mid.

1883.	Allin: Flora (*19*).
1889–1900.	Phillips: list of 740 species.[1]

[1] Including the work of previous observers.

5. Cork East.

1883.	Allin: Flora (*19*).
1889–1900.	Phillips: list of 760 species.[1]

6. Waterford.

1882–1900.	Flemyng: list of 130 species.
1883.	Hart: Wexford and Waterford coasts (*384*).
1884.	,, : Mountain-ranges of Ireland (*381*).
1885.	,, : Nore, Blackwater, &c. (*388*).
1897–1900.	Praeger: list of 520 species.
1900.	Phillips: list of 80 rarer species.

7. Tipperary South.

1883.	Hart: Suir (*384*).
1897–1900.	Praeger: list of 520 species.
1900.	Phillips: list of 130 rarer species.

8. Limerick.

1890.	Stewart: South Clare and Shannon (*863*).
1897–9.	Limerick Field Club Herbarium.
1899.	Somerville: list of 380 species.
1900.	Praeger: list of 510 species.

9. Clare.

1862.	Foot: Burren (*324*).
1875.	Hart: Aran Islands (*365*).
1880.	Corry: Ramble in Clare (*240*).
1890.	Stewart: South Clare and Shannon (*863*).
1895.	Colgan: list of 410 species.
1895.	Praeger: list of 450 species.
1899–1900.	Miss Knowles: list of 390 species.

10. Tipperary North.

1896.	Colgan: list of 200 species.
1898–1900.	Praeger: list of 530 species.
1900.	Phillips: list of 220 rarer species.

11. Kilkenny.

1885.	Hart: Nore, Blackwater, &c. (*388*).
1897–9.	Praeger: list of 550 species.
1898–9.	Mrs. Persse: list of 200 species.
1900.	Phillips: list of 120 rarer species.

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[1] Including the work of previous observers.

12. WEXFORD.

1881.	HART: Slaney (*371*).
1883.	,, Wexford and Waterford coasts (*384*).
1889.	MOFFAT: Ballyhyland (*552*).
1889.	BARRETT-HAMILTON and GLASCOTT: New Ross (*100*).
1890.	,, ,, Kilmanock (*101*).
1892.	,, and MOFFAT: Characteristic Plants (*103*).
1892.	,, ,, Notes on Wexford Plants (*102*).
1896.	PRAEGER: list of 240 species.
1896–7.	MARSHALL: list of 450 species.

13. CARLOW.

1881.	HART: Slaney (*371*).
1897–9.	PRAEGER: list of 540 species.

14. QUEEN'S COUNTY.

1855.	HART: Barrow (*383*).
1896–8.	PRAEGER: list of 540 species.

15. GALWAY SE.

1855.	MORE: Castle Taylor (*598*).
1880–1900.	MRS. JOYCE: Herbarium of 370 species.
1896.	COLGAN: list of 290 species.
1897–1900.	PRAEGER: list of 590 species.
1900.	PHILLIPS: list of 120 rarer species.

16. GALWAY WEST.

1876.	MORE: Iniahbofin (*616*).
1883.	HART: Mayo and Galway mountains (*380*).
1895–6.	MARSHALL: list of 440 species.
1895–8.	COLGAN: list of 380 species.
1896–9.	PRAEGER: list of 510 species.

17. GALWAY NE.

1896–1900.	PRAEGER: list of 550 species.

18. KING'S COUNTY.

1885.	HART: Barrow (*383*).
1896–1900.	PRAEGER: list of 530 species.

19. KILDARE.

1896–1900.	PRAEGER: list of 520 species.

20. WICKLOW.

1878.	British Association Guide (*513*).
1894–1900.	PRAEGER: lists of 550 species.

21. DUBLIN.

1882.	HART: Lambay (*376*).
1887.	„ Howth (*395*).
1892–1900.	COLGAN: list of 720 species.[1]
1893–1900.	PRAEGER: lists of 500 species.

22. MEATH.

1896–1900.	PRAEGER: list of 590 species.

23. WESTMEATH.

1887.	BARRINGTON and VOWELL: Lough Ree (*113*).
1894–5.	LEVINGE: Flora of Westmeath (*484–6*).
1896.	LINTON: Westmeath plants (*503*).
1897.	CARR: list of 200 species.
1898–9.	PRAEGER: list of 480 species.

24. LONGFORD.

1887.	BARRINGTON and VOWELL: Lough Ree (*113*).
1898–1900.	PRAEGER: list of 540 species.

25. ROSCOMMON.

1885.	STEWART; Lough Allen (*859*).
1887.	BARRINGTON and VOWELL: Lough Ree (*113*).
1897–1900.	PRAEGER: list of 520 species.

26. MAYO EAST.

1890–5.	MRS. PERSSE: list of 330 species.
1895–6.	MARSHALL: list of 390 species.
1899–1900.	PRAEGER: list of 460 species.

27. MAYO WEST.

1883.	HART: Mayo and Galway mountains (*380*).
1898–9.	COLGAN: list of 170 species.
1898–1900.	PRAEGER: list of 520 species.
1899.	MARSHALL: list of 440 species.

28. SLIGO.

1884.	CORRY: Ben Bulben (*248*).
1885.	BARRINGTON and VOWELL: Ben Bulben (*112*).
1896.	COLGAN: list of 390 species.
1897–1900.	PRAEGER: list of 520 species.

29. LEITRIM.

1885.	STEWART: Lough Allen (*859*).
1885.	BARRINGTON and VOWELL: Ben Bulben (*112*).
1897–1900.	PRAEGER: list of 500 species.
1900.	SOMERVILLE: list of 260 species.

[1] Including the work of previous observers.

30. CAVAN.

1882. STEWART: Fermanagh and Cavan (*854*).
1896. PRAEGER: list of 450 species.
1900. SOMERVILLE: list of 280 species.

31. LOUTH.

1896–1900. PRAEGER: list of 580 species.

32. MONAGHAN.

1896–1900. PRAEGER: list of 410 species.
1900. WADDELL: list of 360 species.
1900. SOMERVILLE: list of 300 species.

33. FERMANAGH.

1882. STEWART: Fermanagh and Cavan (*854*).
1884. BARRINGTON: Lough Erne (*108*).
1899–1900. WEST and TETLEY: list of 400 species.
1899–1900. PRAEGER: list of 410 species.

34. DONEGAL EAST.

1898. HART: Flora (*404*).
1899. ,, Excursions in 1898 (*405*).

35. DONEGAL WEST.

1898. HART: Flora (*404*).
1899. ,, Excursions in 1898 (*405*).

36. TYRONE.

1896–1900. MISS KNOWLES: list of 570 species.

37. ARMAGH.

1892. PRAEGER: Flora (*701*).

38. DOWN.

1888. STEWART and CORRY: Flora NE. I. (*872*).
1892. ,, and PRAEGER: Mourne Mountains (*873*).
1895. ,, ,, Suppl. Flora NE. I. (*874*).

39. ANTRIM.

1888. STEWART and CORRY: Flora NE. I. (*872*).
1894. SHOOLBRED: Botanical trip to Antrim (*837*).
1895. STEWART and PRAEGER: Suppl. Flora NE. I. (*874*).
1897. PRAEGER: list of 200 species.
1899–1900. MISS KNOWLES: list of 470 species.

40. LONDONDERRY.

1888. STEWART and CORRY: Flora NE. I. (*872*).
1895. STEWART and PRAEGER: Suppl. Flora NE. I. (*874*).
1895–7. MRS. LEEBODY: list of 400 species.

Bibliography of Irish Topographical Botany.—Until the publication of the second edition of "Cybele Hibernica" in 1898, the bibliography of Irish botany was a much neglected field. In consequence it was most difficult to determine what was known regarding the botany of any district, or the distribution of any plant, since no catalogue was available of papers published since the first edition of "Cybele" in 1866. The 'List of Principal Papers, &c.,' in the second edition is useful, but, as its title states, the more important papers only are included. For this reason, an attempt is here made at a full bibliography of Irish topographical botany. The historical and biographical, as well as the botanical, interest of a complete list of the kind it is unnecessary to point out. The qualification for the admission of a paper or note into the list is essentially the connexion of a *plant* with a *locality*; discussions as to the identity of Irish plants have, in most cases, also been given a place; but in some instances the cataloguing of such papers would unnecessarily encumber the list, as, for instance, the controversies in the "Phytologist" and elsewhere on the Robertsonian Saxifrages, on *Hymenophyllum*, and on *Lastrea æmula*. Other omissions include general works on British botany, such as those of Sowerby, Hooker, Babington; these are practically devoid of original records of Irish plants, and in any case there is no danger of their being overlooked by anyone desirous of making his survey of the literature of the subject absolutely complete. Guide-books likewise are in many cases omitted, as containing no original information. Reviews and extracts from papers are often excluded for the same reason. With these exceptions, an attempt has been made to catalogue all books, papers, and notes bearing on the distribution of plants in Ireland. In bibliography it is well to err on the side of fulness, since a note or record, apparently trivial, may supply a missing link or fill a gap in some chain of argument or some plant's history. On this account I have not hesitated to include many references which might be thought trivial by those who have not experienced the difficulty of exploring to their ultimate limit the nooks and crannies of botanical records. So scattered are the references to Irish plants, that I cannot doubt that certain papers and notes have escaped observation; and I shall deem it a favour if these omissions are pointed out.

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VII.—TABLE SHOWING THE DISTRIBUTION OF SPECIES IN THE FORTY BOTANICAL DIVISIONS.

	1—10	11—20	21—30	31—40
*Clematis Vitalba	1 2 – 4 5 – – 8 9 0	– 2 – 4 – – – 8 – 0	1 2 – – – 6 – – – –	1 – – – – – 7 – – –
Thalictrum alpinum	1 – – – – – – – – –	– – – – – 6 – – – –	– – – – – – 7 8 – –	– – – – 5 – – – – –
dunense	– – – – – – – – – –	– 2 – – – – – – – 0	1 – – – – – – – – –	– – – – 5 – – 8 9 –
collinum	1 2 3 – – – 7 – 9 0	– – – – 5 6 7 – – –	– – 3 4 5 6 7 8 9 –	– – 3 4 – – – 8 9 –
flavum	– – – – – – 7 8 – 0	1 – 3 4 5 – 7 8 9 0	– 2 3 4 5 – – – – –	1 2 3 – – 6 7 – 9 0
Anemone nemorosa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 – 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Ranunculus circinatus	– – – (4) – – – 8 9 0	– – 3 4 – – – – 9 –	1 2 3 4 5 – – – – –	– – – – – – 7 8 – –
fluitans	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – 9 –
trichophyllus	1 2 3 4 5 6 7 – 9 0	– 2 – 4 5 6 7 8 9 –	1 2 3 4 5 6 – 8 – –	– 2 – – 5 6 7 8 9 0
Drouetii	– 2 – – 5 – – – – –	– 2 – – – 6 – 8 9 –	1 – 3 – – 6 7 – – –	1 – – – 5 – – – – –
heterophyllus	– – – – 5 6 – – 9 0	– 2 – 4 5 6 – – – –	1 2 3 4 5 6 – – – –	– – 3 4 5 – 7 8 9 –
peltatus	1 2 – 4 5 – 7 – – 0	– 2 3 – – – – – – 0	1 2 3 4 – 6 7 – – –	– 2 – 4 – 6 7 8 9 0
penicillatus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 – 7 – 9 0	1 2 3 4 5 – – 8 – –	1 2 3 4 – 6 7 – 9 0
Baudotii	1 2 3 4 5 6 – – 9 –	– 2 – – – 6 7 – – –	1 – – – – – – – – –	1 – – 4 5 – 7 – – –
tripartitus	– – 3 – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –
Lenormandi	1 2 3 4 5 6 7 – – –	1 2 3 – – – – – – 0	1 – – – – – – – – –	– – – – – – – – – –
hederaceus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
sceleratus	1 2 3 4 5 6 – 8 9 0	1 2 3 4 – 6 7 8 9 0	1 2 3 4 5 – 7 8 – –	1 2 – 4 5 6 7 8 9 0
Flammula	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
scoticus	– – – – – – – – – –	– – – – – – – – – –	– – – – – – 7 – (9) –	– – – – – – – – – –
Lingua	1 – – 4 – 6 7 – 9 0	1 2 – 4 5 6 7 – 9 0	1 2 3 4 5 6 – – – 0	1 2 3 (4) (5) – 7 8 9 0
Auricomus	– – – 4 5 – 7 – – –	1 – – – 5 – 7 8 9 0	1 2 3 – – 6 7 – 9 0	1 – 3 – 5 – 7 8 9 0
acris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
repens	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
bulbosus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0

Caltha palustris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
radicans	- - - -	- - - -	- - - - - - - -	- - 3 - - - - - -
Trollius europæus	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - -	- - 3 4 5 - - - - -
Aquilegia vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 - 4 5 6 7 8 9 0	1 2 3 - 5 6 - - - -	1 - 3 4 - - 7 8 9 0
Nuphar luteum	1 2 3 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Nymphæa alba	1 2 3 4 5 6 7 8 9 0	1(2)(3)- 5 6 7 8 9(0)	(1)2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Papaver somniferum	1 2 3 4 5 - 7 8 - -	- - - - - - - - - -	1 2 - - - 6 - - - -	1 - - 4 - - - 8 - -
Rhœas	(1)(2)3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 -	1 2 - -(5)6 7 8 9 0
dubium	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 - - 0	1 2 - 4 5 6 7 8 9 0
† Argemone	- - 3 4 5 6 7 - 9 -	1 2 3 4 - - 7 - 9 0	1 2 3 4 5 - 7 - - -	1 - - - - - 7 8 9 0
† hybridum	- - -(4)5 - - 8 9 -	- 2 - - 5 - - - - 0	1 - - 4 - - - - - -	1 - - - - - - 8 - -
Meconopsis cambrica	- - - - - 6 - 8 9 -	- - - 4 - 6 - - - 0	- - - - - - - 8 - -	- - - - - 6 - 8 9 0
Glaucium flavum	1 2 3 4 5 6 - - 9 -	- 2 - - 5 6 7 - - 0	1 2 - - - - - - - -	1 - - - - - - 8 - -
*Chelidonium majus	1 2 3 4 5 6 7 8 9 0	1 - 3 4 5 - - 8 9 0	1 2 3 4 5 6 - - - -	1 - 3 4 5 6 7 8 9 0
*Corydalis lutea	- - - - - - - - - -	- - - - 5 - - - - 0	- - - - - - - - - -	- - - - 5 - - 8 9 -
claviculata	- - - - - 6 - - - -	1 - - - - - - - - 0	1 - - - - - - - - -	- - - 4 - - - - - -
Fumaria pallidiflora	1 2 3 4 5 6 7 - 9 0	- 2 - 4 5 6 7 - - 0	1 - - - - - - 8 - -	- - - 4 5 6 7 8 9 0
Boræi	- 2 - - - - - - - 0	- 2 3 - - - 7 8 - 0	1 - - 4 5 - - 8 - -	1 - - - - - - 8 9 -
confusa	1 2 3 4 5 6 7 8 9 0	1 2 3 - 5 6 7 - - 0	1 - 3 4 5 - 7 8 9 0	- - - 4 - 6 7 8 - -
muralis	- - 3 - - - 7 - - -	- 2 - 4 5 - 7 8 - -	1 2 - - 5 - - - - -	1 - - - - - 7 8 9 -
densiflora	- - - - - - - - - -	- - - - - - 7 - - -	1 - - - - - - - 9 -	- - - - - - 7 - - -
officinalis	1 2 3 4 5 6 7 8 9 0	- 2 3 4 5 - 7 - 9 0	1 2 - - 5 - - - - -	1 - - 4 5 6 7 8 9 0
Matthiola sinuata	-(2)- - - - - - 9 -	- 2 - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
*Cheiranthus Cheiri	- 2 3 4 5 6 7 8 - 0	1 - 3 - 5 6 7 - 9 0	1 2 3 - 5 - - 8 - -	1 2 - 4 5 6 - 8 9 -
Nasturtium officinale	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
sylvestre	- - - - 5 6 7 8 - -	1 - - 4 - 6 - - 9 -	- - - - - - 7 - - -	- - 3 - - - - - - -
palustre	- 2 - 4 5 6 7 8 9 0	1 2 3 - 5 6 7 8 9 -	1 2 3 4 5 6 7 8 9 0	1 2 3 - - 6 7 8 9 0
amphibium	- - 3 - 5 6 7 8 9 0	1 - 3 4 5 - 7 8 - 0	- 2 3 4 5 6 7 8 9 0	- - 3 4 - 6 7 8 9 0

	1—10	11—20	21—30	31—40
Barbarea vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
intermedia	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - 8 - -	- - - - - - - 7 8 9 0
* præcox	1 - 3 4 5 6 - - - -	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - 7 8 - -
Arabis petræa	- - - - - - - 7 - - -	- - - - - - - - - -	- - - - - - - - 9 -	- - - - - - - - - -
hirsuta	1 2 - - 5 - 7 8 9 -	1 - 3 - 5 6 7 - 9 -	1 2 - - 5 6 7 8 9 0	1 - 3 4 5 - - 8 9 0
ciliata	1 - 3 - - - - - 9 -	- - - - - 6 - - - -	- - - - - - - - - -	- - - - 5 - - - - -
Cardamine amara	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - 0	- - - 4 - 6 - 8 9 0
pratensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
hirsuta	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
flexuosa	1 2 3 4 5 6 7 8 - 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
‡Draba muralis	- - - (4) - - - - - -	1 - - - - - - - - -	1 - - - - - - - - -	- - - - - - - 8 9 -
incana	1 - - - - - - - - -	- - - - - 6 - - - -	- - - - - - 7 8 9 -	- - - 4 5 - - - - 0
Erophila vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 - 3 4 5 - 7 8 9 0
Cochlearia officinalis	1 2 3 4 5 6 - 8 9 -	- 2 - - 5 6 7 - - 0	1 2 - - - - 7 8 9 -	1 - - 4 5 - 7 8 9 0
danica	1 - 3 4 5 6 - - 9 -	- 2 - - 5 6 7 - - 0	1 - - - - - - 8 9 -	1 - - - 5 6 7 8 9 0
anglica	1 - 3 4 5 6 - 8 - -	1 2 - - - - - - - -	- - - - - - - - - -	- - - - - 6 - - - 0
*Hesperis matronalis	- - 3 4 5 - - - - -	- 2 - - - - - - - 0	- - - - 5 - - - - 0	- - 3 - - - - 8 9 -
Sisymbrium Thalianum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 - - 7 8 - 0	1 2 - - - 6 7 - 9 -	1 - - 4 - - 7 8 9 0
officinale	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
‡ Sophia	- - - - - 6 - 8 - -	- - - - - - - - 9 0	1 2 - - - - - - - -	1 - - - - - - - (9) -
† Irio	- - - - - - - - - -	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
Alliaria	1 2 - 4 5 6 7 8 9 0	1 - 3 4 - - - 8 9 0	1 2 3 4 - - 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Erysimum cheiranthoides	- - - 4 - - 7 - - 0	- - - - 5 6 - 8 - -	1 - 3 4 5 - - - - -	- - 3 - 5 - - - 9 -
Subularia aquatica	1 2 3 - - - - - 9 -	- - - - - 6 - - - -	- - - - - - 7 - - -	- - - - (5) - (7)(8)(9)(0)
‡Brassica Rapa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 - 9 0	1 2 3 4 5 6 7 8 9 0
nigra	1 2 3 4 5 - 8 9	2 - - 6 - - 0	1 - - - - - - -	1 - - - 5 - (9)(0)

†Capsella Bursa-pastoris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
‡Senebiera didyma	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 – – 0	1 – – – – – 7 – – –	1 – – – – – – 8 9 –
Coronopus	1 2 3 4 5 6 7 8 9 0	1 2 3 – 5 6 7 – 9 0	1 2 3 4 – – 7 – – –	1 – – 4 – – – 8 9 0
†Lepidium latifolium	(1) – 3 4 5 6 – 8 – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –
† campestre	– – – – – – 7 8 – –	1 – 3 – 5 – – – – –	– – – – – – – – – –	– – – – – – 7 8 9 –
hirtum	1 2 3 4 5 6 7 8 – 0	1 2 3 4 – – – – 9 0	1 2 – 4 – – – – – 0	1 2 – – (5) 6 7 8 9 0
†Thlaspi arvense	– – (3)(4)(5) 6 – 8 9 –	1 2 3 – – – – – – 0	1 2 – – – – – 8 – –	1 – – – – – 7 8 9 0
†Teesdalia nudicaulis	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – 6 – 8 9 –
Crambe maritima	– – (3) 4 5 – – – 9 –	– – – – – – – – – 0	1 – – – – – – – – –	– – – (4)(5) – – 8 (9) –
Cakile maritima	1 2 3 – 5 6 – – 9 –	– 2 – – – 6 – – – 0	1 2 – – – – – – – –	1 – – 4 5 – – 8 9 0
Raphanus Raphanistrum	1 2 3 4 5 6 – 8 9 0	– 2 3 – – 6 7 8 9 0	1 2 3 4 – 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
maritimus	1 2 3 – – 6 – – 9 –	– 2 – – – 6 7 – – (0)	1 – – – – – – 8 – –	1 – – 4 – – – 8 9 –
†Reseda lutea	1 – 3 – 5 6 – 8 9 –	1 2 3 4 – – 7 – 9 0	1 2 – – – – 7 – – 0	1 – – 4 5 – – – 9 –
Luteola	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 – 0	1 2 3 4 5 6 7 8 9 0
Helianthemum guttatum	– – 3 – – – – – – –	– – – – – 6 – – – –	– – – – – – – – – –	– – – – – – – – – –
vineale	– – – – – – – – 9 –	– – – – – 6 – – – –	– – – – – – – – – –	– – – – – – – – – –
Viola palustris	1 2 3 4 5 6 7 – 9 0	1 2 3 4 5 6 7 8 – 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
odorata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 – 7 8 9 0	1 2 3 4 5 6 7 – – 0	1 – 3 4 – 6 7 8 9 0
hirta	– – – – – – – 8 9 –	– 2 – – – – – – 9 –	1 – – – – – – – – –	– – – – – – – – – –
Riviniana	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Reichenbachiana	1 2 – – – – – – – –	– 2 – 4 5 6 – – – 0	1 – 3 – – – 7 – – –	– – – – 5 – – – 9 –
canina	1 2 3 4 5 6 – – 9 0	1 2 3 – 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 – 6 7 8 9 0
stagnina	– – – – – – – – 9 –	– – – – 5 – – – – –	– – – 4 – 6 – – – –	– – – – – – – – – –
tricolor	1 2 3 4 5 – – 8 – –	– 2 3 – – 6 – 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 – 0	1 2 3 – – 6 7 8 9 0
Curtisii	1 2 3 4 5 6 – – 9 –	– 2 – – – 6 – – – 0	1 2 – – – – 7 8 – –	– – 3 4 5 – – 8 9 0
lutea	– – 3 – – – – – 9 –	– – – – – – – – 9 0	1 – – – – – – – – (0)	– – – – – – – – – –

	1—10	11—20	21—30	31—40
Polygala vulgaris	1 2 3 4 5 6 7 – 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 – 0	1 – 3 4 5 6 7 8 9 0
serpyllacea	1 2 3 4 5 – 7 8 9 0	1 2 3 4 5 6 7 8 – 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Saponaria officinalis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 – – – 8 – 0	1 – 3 4 – – – 8 – 0	– – 3 4 – 6 7 8 9 0
Silene Cucubalus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 – 0	1 2 3 4 5 6 7 8 9 0
maritima	1 2 3 4 5 6 – 8 9 –	– 2 – – 5 6 7 – – 0	1 2 – – – – 7 8 9 –	1 – – 4 5 6 – 8 9 0
† anglica	1 2 3 – 5 – – – – –	– 2 3 – – 6 – – – –	1 – – – – – – – – –	1 – – 4 5 6 – 8 9 0
acaulis	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – 8 9 –	– – – 4 – – – – – 0
‡ noctiflora	– 2 – – – – – – – –	– – – – – – – 8 – –	(1)2 – – – – – – – –	1 – – – – – 7 8 9 0
†Lychnis vespertina	1 2 3 4 5 6 – – – 0	1 2 3 4 – (6) – 8 9 0	1 2 – – 5 6 – – – –	1 – – 4 5 6 – 8 9 0
diurna	1 2 3 4 5 6 7 – 9 –	– 2 3 – 5 6 7 – 9 0	1 – 3 – 5 – 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Flos-cuculi	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
‡ Githago	1 2 3 4 5 6 – – 9 0	1 2 3 – 5 6 – – 9 0	1 2 3 – – 6 – 8 – –	1 – – 4 5 6 7 8 9 0
Cerastium tetrandrum	1 2 3 4 5 6 – 8 9 0	– 2 – – 5 6 7 8 9 0	1 2 – – 5 6 7 8 9 –	1 – – 4 5 – 7 8 9 0
semidecandrum	1 2 3 4 5 6 – – 9 –	– 2 – – – – – – – 0	1 – – – 5 – 7 – – –	– – – 4 5 – – 8 9 0
glomeratum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
triviale	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
arvense	1 – – – 5 – – – 9 –	– – – – 5 6 7 – – 0	1 2 – – – – – – – –	– – – – – – – – – 9 –
Stellaria media	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Holostea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 – 8 9 0	1 2 3 4 5 6 7 8 9 0
palustris	– – – – – – – – – 0	1 – 3 4 5 6 7 8 9 –	(1)2 3 4 5 6 – 8 9 0	1 – 3 – – – – – – –
graminea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
uliginosa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Arenaria verna	– – – – – – – – 9 –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – 9 0
• tenuifolia	– – – – – – 7 8 – 0	– – 3 4 5 6 7 8 9 0	1 2 3 – 5 – – – – –	– – – – – – – – – –
trinervia	1 2 3 4 5 6 7 – 9 0	1 2 3 4 5 – 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 – 3 4 5 6 7 8 9 0
serpyllifolia	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 – 7 8 9 0

[illegible]	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
maritima	1 2 3 4 5 6 - - - 9 -	- 2 - - - - 7 - - 0	1 2 - - - - 7 8 - -	1 - - 4 5 - 7 8 9 0
ciliata	1 2 - - - - - - 9 -	- 2 3 - - - - - - 0	1 - - - - - - - - -	- - - - - - - 8 9 -
procumbens	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
subulata	1 - 3 - - - - - 9 -	- - - - - 6 - - - -	- - - - - - - - - -	- - - 4 5 - - - 9 0
nodosa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 - 7 8 9 0
Spergula arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Spergularia rubra	- - 3 4 5 - - - - -	- 2 - 4 - - - - - -	- - - - - - - - - -	- - - - - - - 7 8 9 0
media	1 2 3 4 5 6 - 8 9 -	1 2 - - 5 6 7 - - 0	1 2 - - - - 7 8 9 -	1 - - 4 5 - 7 8 9 0
salina	1 2 3 4 5 6 - 8 9 -	1 2 - - 5 6 7 - - 0	1 2 - - - - 7 8 9 -	1 - - 4 5 - - 8 9 0
rupestris	1 2 3 4 5 6 - 8 9 -	1 2 - - - 6 - - - 0	1 - - - - - 7 - - -	1 - - 4 5 - - 8 9 -
Montia fontana	1 2 3 4 5 6 7 - - 0	1 2 3 4 5 6 7 8 9 0	1 - - 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Elatine hexandra	1 2 3 - - - - - 9 -	- - - - - 6 - - - -	- - - - - - - - - -	- - - 4 5 - 7 8 - 0
Hydropiper	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - (7) 8 - -
Hypericum Androsæmum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
* calycinum	- 2 - - 5 - - - - -	- 2 - - - - - - - 0	- - - - - - - - - -	- - - - - - - - - -
* hircinum	- - - 4 5 - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
perforatum	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 - - 0	1 2 3 4 5 6 7 8 9 0
dubium	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	- - 3 - 5 6 7 8 9 -	1 - 3 - - 6 7 8 9 0
tetrapterum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
humifusum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 - - 0	1 2 - - - 6 7 - 9 0	1 2 3 4 5 6 7 8 9 0
pulchrum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
hirsutum	- - - - - - - - - -	- - - - - - - - 9 -	1 2 - - - - - - - -	- - - - - - - - 9 -
elodes	1 2 3 4 5 6 7 - 9 -	1 2 3 - - 6 - - - 0	1 - - - - - 7 - 9 -	1 - - 4 5 - 7 8 9 0
‡ Athæa officinalis	1 2 3 - 5 6 - - 9 -	- - - - - 6 - - - -	- - - - 5 - 7 - - -	- - - 4 5 6 - - - -
Lavatera arborea	1 2 3 4 5 6 - (8) 9 -	- 2 - - (5) - - - - 0	1 - - - - - (7)(8) - -	- - - - - - - 8 9 -
Malva moschata	1 2 3 4 5 6 7 8 - 0	1 2 3 4 - 6 7 8 9 0	1 2 3 4 5 6 - 8 - -	1 - - 4 - - 7 8 9 0
sylvestris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0

	1—10	11—20	21—30	31—40
Malva rotundifolia	1 2 3 4 5 – 7 – 9 0	1 2 – 4 5 6 7 – – 0	1 2 – – – – – – – –	1 – 3 – – 6 – 8 9 0
Radiola linoides	1 2 3 – 5 6 – – 9 –	– 2 3 – – 6 – – – –	– – – – – 6 7 8 – –	1 – – 4 5 6 7 8 9 0
Linum catharticum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
angustifolium	1 2 3 4 5 6 7 – – –	1 2 3 –(5)– – – 9 0	1 2 – – – – – – – –	– – – – – – – – – –
Geranium sanguineum	– – – – – – – – 9 0	– – – – 5 6 7 8 –(0)	1 – – – 5 6 – – – –	– – – 4 5 – –(8)(9)–
* Phæum	– – – – 5 – – 8 – –	– – – – – – – – – –	– 2 – – – – – – – 0	– – 3 4 – 6 7 8 9 –
sylvaticum	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – –(8) 9 –
pratense	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – 9 –
pyrenaicum	– – – 4(5) 6 – – 9 –	1 2 3 4 5 – – 8 9 0	1 2 3 4 – 6 7 – – –	1 – – – – 6(7) 8 9 –
molle	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
† pusillum	– – – – 5 6 – 8 9 –	– – – – – – – – – –	1 – – – – 6 – – – –	– – – – – – – – – –
rotundifolium	– – 3 4 5 – – – 9 –	– 2 – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –
dissectum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
columbinum	1 – 3 4 5 – 7 8 9 0	1 2 3 – 5 – 7 – 9 0	1 – – – – 6 – – – –	1 – – – – 6 – – – –
lucidum	1 2 3 4 5 6 7 8 9 0	1(2)– 4 5 6 7 8 9 0	1 2 3 4 5 6 – 8 9 0	– – 3 4 5 – – – 9 0
Robertianum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Erodium cicutarium	1 2 3 4 5 6 – 8 9 –	1 2 – – 5 6 7 – – 0	1 2 – – – – 7 8 – –	1 – – 4 5 – – 8 9 0
moschatum	1 2 3 4 5 6 – 8 9 –	– 2 – – – 6 7 8 – 0	1 – – – – – 7 – – –	1 – – 4 5 – – 8 9 –
maritimum	– – 3 4 5 6 – – 9 –	– 2 – – – 6 – – – 0	1 2 – – – – – – – –	– – – – – – – 8(9)(0)
Oxalis Acetosella	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Ilex Aquifolium	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 – 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Euonymus europæus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Rhamnus catharticus	– 2 – – – – – – 9 0	– – – 4 5 6 7 8 9 0	– – 3 4 5 6 7 – – 0	– – 3 – – – – –(9)(0)
Frangula	– 2 – – – – – – 9 0	– – – 4 5 6 – 8 9 0	– – – 4 – 6 – – – –	– – – – – – –(8) 9 (0)
Ulex europæus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Gallii	1 2 3 4 5 6 7 – 9 0	1 2 3 4 5 6 – 8 9 0	1 2	1 2 – 4 5 6 7 8 9 0

Trigonella ornithopodioides	- - - 4 - - - - - - -	- 2 - - - - - - - 0	1 - - - - - - - - - -	1 - - - - - - - - (8) - -
* Medicago sativa	- - 3 - 5 6 - 8 9 0	- 2 - - - - - - - - -	1 2 3 - - - - - - - -	- - - - - - - 7 8 9 -
† sylvestris	- - - - - - - - - -	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
lupulina	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
* maculata	- - - - 5 - - - - -	- 2 - - - - - - - 0	- - - - - - - - - -	- - - - - - - - - -
‡ Melilotus officinalis	- - - 4 5 - - - 9 -	1 2 - - - - - - - 0	1 - - - - - - - - -	- - - - - - 7 - 9 -
* arvensis	- - - - 5 - 7 8 - -	- - - - 5 - - - - -	- - - - - - - - - -	1 - - - - - - - 9 -
Trifolium subterraneum	- - - - - - - - - -	- - - - - - - - - 0	- - - - - - - - - -	- - - - - - - - - -
pratense	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
medium	1 2 - 4 5 6 7 - 9 0	- 2 - 4 5 - - 8 9 0	1 2 - - - 6 7 8 - -	1 2 3 4 5 6 7 8 9 0
arvense	- - 3 4 5 6 - - 9 -	1 2 - - - - - - - 0	1 - - - - - 7 - - -	1 - - 4 - - - 8 9 0
striatum	- 2 3 4 - - - - 9 -	- 2 - - - - - - - 0	1 - - - - - - - - -	1 - - - - - - - 9 -
scabrum	- - - - 5 - - - - -	- 2 - - - - - - - 0	1 - - - - - - - - -	- - - - - - - - - -
glomeratum	- - - - - - - - - -	- 2 - - - - - - - 0	- - - - - - - - - -	- - - - - - - - - -
* hybridum	1 2 3 4 5 6 7 8 - 0	1 2 3 4 5 - 7 8 9 0	1 2 3 - - 6 7 8 - 0	1 2 3 - - 6 7 8 9 0
repens	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
fragiferum	1 2 - - (5) 6 - - - -	1 2 3 - - - - - - 0	1 2 - - - - - 8 - -	1 - - - - - - - - -
* agrarium	- - - - - - - - - 0	1 2 - - - - 7 - - 0	- - - - - - - - - -	- - - 4 - - - 8 - -
procumbens	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 - 0	1 2 3 4 5 6 7 8 9 0
dubium	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
filiforme	1 2 - 4 5 - 7 - 9 -	- 2 - 4 - 6 - - 9 0	1 - - - - - - - - -	- - - - 5 - 7 - - -
Anthyllis Vulneraria	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 - -	1 - 3 4 5 6 7 8 9 0
Lotus corniculatus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
‡ *tenuis*	- - - - - 6 - - - -	- 2 - - - - - - - -	1 - - - - - - - - -	- - - - 5 - - - (9) -
uliginosus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - 8 - 0	1 2 3 4 - - 7 - 9 0	1 2 3 4 5 6 7 8 9 0
Astragalus Hypoglottis	- - - - - - - - 9 -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Ornithopus perpusillus	- - 3 - - - - - - -	- 2 - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
Vicia hirsuta	1 2 3 4 5 6 7 8 9 -	1 2 3 - 5 6 - - 9 0	1 2 3 - - 6 - 8 - -	1 2 3 4 5 - 7 8 9 0

	1—10	11—20	21—30	31—40
†Vicia tetrasperma	- - - 4 5 - - - - -	- - - - - - - - - -	1 2 3 - - - - - - -	- - - - - - - 8 - -
Cracca	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Orobus	- - - - - - - - - -	- - - - - 6 7 8 - -	- - - - - - - - - -	- - - - - - - - 9 -
sylvatica	- 2 3 4 5 6 - 8 9 -	1 2 - - - 6 - - - 0	1 - - - - 6 - 8 9 -	1 - 3 4 5 - - 8 9 0
sepium	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
angustifolia	1 2 3 4 5 6 7 8 - 0	1 2 3 4 5 6 - - 9 0	1 2 - 4 - 6 - - 9 0	1 2 3 4 5 6 7 8 9 0
lathyroides	- - - - - - - - - -	- - - - - - - - - 0	1 - - - - - - - - -	- - - 4 - - - 8 9 0
Lathyrus pratensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
palustris	- - - - - - - - - -	- - - - 5 - - - - 0	- 2 3 4 5 - - - - 0	- - 3 - - (6) 7 - (9) -
(maritimus)	(1) - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
macrorrhizus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 - - - 5 6 7 8 - 0	1 2 3 4 5 6 7 8 9 0
Prunus spinosa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
* *insititia*	1 2 3 4 5 - 7 8 (9) 0	1 - - - - 6 - 8 9 -	1 2 3 - - - - 8 9 -	1 2 3 4 5 6 7 8 9 0
Avium	1 2 - 4 5 - 7 8 - -	1 2 3 4 - - - - 9 0	1 2 3 - 5 - - 8 - 0	1 2 3 4 5 6 7 8 9 0
‡ Cerasus	1 - 3 4 5 6 7 8 - 0	1 2 3 4 5 6 - 8 9 0	1 2 3 - 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Padus	1 2 3 4 5 - - 8 9 0	- 2 - 4 5 - 7 8 - -	- 2 3 - 5 - - 8 9 -	- 2 3 4 5 6 - 8 9 0
Spiræa Ulmaria	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Filipendula	- - - - - - - - 9 -	- - - - 5 - - - - -	- - - - - - - - - -	- - - - - - - - - -
Rubus Idæus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
fruticosus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
flexus	- - 3 4 - - - - - -	- - - - - - - - - -	- - 3 - - - - - - -	- 2 - 4 - - - 8 - 0
suberectus	- - 3 - - - - - - -	- - - - - - 7 - - -	- - 3 - - - - - - -	- - - 4 5 - - 8 - 0
Rogersii	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 9 0
plicatus	- - 3 4 - - - - - -	- 2 3 - 5 6 7 - - -	- 2 3 - - 6 7 8 - -	- 2 3 4 5 6 7 8 - 0
nitidus		- - - - - - - - - -	3 9 -	- - - - 8 - -
affinis	2 -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -

Lindleianus	- - - - - - - - - -	1 - - - 6	- - 3 - - 6 - - - -	- 2 - - - - 7 8 9 0
erythrinus	- - - - - - - - - -	- - - - 6 - -	- - 3 - - 6 - - -	- - - - - - - - - 0
rhamnifolius	- - - - - - - - - -	- 2 - - - 6 - - - -	1 2 3 - - - - - - -	- - - 4 5 - 7 8 9 0
nemoralis	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 - -
dumnoniensis	- - - - - - - - - -	1 - - - - 6 - - - -	- - - - - - 7 - - -	- - - - - - - - - -
pulcherrimus	- - - - - - - - - -	- 2 - - - 6 - - - 0	1 2 - - - 6 7 - - -	- 2 - - - - 7 8 9 0
villicaulis	- 2 - - - 6 - - 9 -	- - - - - 6 - - - -	- 2 3 - - 6 7 - 9 0	- 2 - 4 5 - 7 8 9 0
gratus	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - 7 - 9 -
argentatus	- - - - - - - - - -	- - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -
rusticanus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
pubescens	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 - -
silvaticus	- - - - - - - - - -	- - - - - 6 - - - 0	1 - - - - - - - - -	- - - - - - - 8 - -
myricæ v. *hesperius*	- - - - - - - - - -	- - - - - 6 - - - -	- - - - - 6 - - - -	- - - - - - - - - -
macrophyllus	1 2 3 4 5 - - - 9 -	- 2 - 4 - - - 8 - 0	1 - 3 - - - - - 9 0	- 2 - 4 5 - 7 8 9 0
Salteri	- - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -	- - - - - - 7 8 - -
Sprengelii	- - - - 5 - - - - -	1 2 - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
micans	- - - - - - - - - -	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - 0
hirtifolius	- - - - - - - - 9 -	1 2 - - - 6 - - - -	- - 3 - - 6 7 - 9 -	- - - - - - - 8 - 0
iricus	- - 3 - 5 - - - - -	- - - - - 6 - - - -	- - - - - 6 7 - - -	- - - - - - - - - -
pyramidalis	- - - - - - - - - -	- 2 - - - 6 - - 9 0	1 - 3 - - 6 7 8 9 -	- - - - 5 - 7 8 9 -
leucostachys	- 2 3 - 5 - - - 9 -	1 2 - 4 - 6 - 8 9 0	1 - 3 - - 6 - 8 9 0	- - - - 5 - 7 8 9 0
lasioclados v. *angustifolius*	- - - - - - - - - -	- 2 - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
criniger	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 - -
Boræanus	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 - -
cinerosus	- - - - - - - - - -	- - - - - 6 - - - -	- - 3 - - 6 - - - -	- - - - - - - - - -
mucronatus	- - - - - - - - - -	- - - - - - - - - -	1 - 3 - - 6 - - - -	- - - - - 6 7 8 9 0
Gelertii	- - - - - - - - - -	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - - 8 - -

	1—10	11—20	21—30	31—40
Rubus *anglosaxonicus*	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - 7 - 9 -
infestus	- - - - - - - - - -	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - 0
Borreri	- - - - - - - - - -	- 2 - - - 6 - - - -	1 - 3 - - - - - - -	- - - - - - 7 - - -
Drejeri	- - - - - - - - - -	- 2 - - - - - - - -	- - - - - - 7 - - -	- - - - - - 7 8 9 0
radula	- 2 - - - - - - - -	- - - - - - - - - -	1 - 3 - - 6 - - - -	- - - - - 6 7 8 9 0
echinatus	- - - - - - - - - -	- - - - - - - - - 0	1 2 - - - - - - - -	- - - - - - 7 - 9 -
rudis	- - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -	- - - - - - - 8 - -
oigocladus	- - - - 5 - - - - -	- - - - - - - - - -	1 - 3 - - - - - - -	- - - - - - - 8 - 0
regillus	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 - -
Babingtonii	- - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -	- - - - - - - 8 - -
Bloxamii	- - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -	- - - - - - - - 9 -
fuscus	- - - - - - - - - -	- 2 - - - 6 - - - -	1 - 3 - - 6 - - - -	- - - - - - - 8 - -
scaber	- - - - - - - - - -	- - - - - 6 - - - 0	1 2 3 - - - - - - -	- - - - - - 7 8 - -
thyrsiger	- - - - - - - - - -	- - - - - - - - - -	- - 3 - - - - - - -	- - - - - - - - - -
foliosus	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 - 0
rosaceus	- 2 3 - - - - 8 - -	- - - - - 6 - - - -	1 - 3 - - - - - - -	- - - - - - - 8 9 -
Koehleri	- 2 - - 5 - - 8 9 -	- - - - - 6 - - - -	1 - - - - 6 - - - 0	- 2 3 - - - 7 8 9 0
viridis	- - - - - - - - - -	- - - - - - - - - 0	- - - - - - - - - -	- - - - - - - - - -
Bellardi	- 2 - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
hirtus	- - - - - - - - - -	- 2 - - - - 7 - - -	- - 3 - - - - - - -	- - - - - - - 8 - -
saxicolus	- - - - - - - - - -	- - - - - - - - - 0	1 - - - - - - - - -	- - - - - - - 8 - -
dumetorum	- - - - - - - 8 - -	1 2 - 4 - 6 - 8 9 0	1 2 3 - - - - - - -	- - - - - - - 8 9 0
corylifolius	- - - - - - - 8 9 -	1 2 - 4 - 6 - 8 9 0	1 - 3 - - 6 - - - -	- 2 - - 5 6 7 8 9 0
Balfourianus	- 2 3 - 5 - 7 - - -	- - - 4 - - - - - -	1 - 3 - - 6 - - - -	- 2 - - - - - - - -
cæsius	1 2 3 - 5 0 7 - 9 0	1 2 - 4 5 6 7 8 - 0	1 - 3 - - 6 - - - -	- - 3 4 5 - 7 - 9 -
sexantilis	2 8 9 0	4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9	1 3 4 5 6 7 8 9 0 0

rivale	1 2 3 4 5 - 7 8 9 0	- 2 3 4 5 6 - 8 9 0	1 - 3 4 5 6 7 8 9 0	- 2 3 4 5 6 7 8 9 0
Fragaria vesca	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Potentilla Fragariastrum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Tormentilla	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
procumbens	- - 3 4 5 6 7 8 - 0	- 2 3 4 5 6 7 - - 0	1 - 3 4 5 6 7 8 9 0	1 2 3 4 - 6 7 8 9 0
reptans	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Anserina	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
fruticosa	- - - - - - - - 9 -	- - - - - 6 7 - - -	- - - - - 6 - - - -	- - - - - - - - - -
palustris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Alchemilla arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
alpina	1 - - - - - - - - -	- - - - - - - - - 0	- - - - - - - - - -	- - - - - - - - - -
Agrimonia Eupatoria	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
odorata	1 2 3 4 5 6 - 8 - -	1 - 3 - - 6 - - - 0	- 2 - - - - 7 8 9 -	1 - - 4 5 - - 8 9 -
Poterium Sanguisorba	- - - 4 5 - 7 8 9 0	1 2 3 4 5 - 7 8 9 0	1 2 3 4 - - - - - -	- - - 4 - - - - 9 -
officinale	- - - - - - - - - -	- - - - - - - - - -	- - - - - - 7 - - -	- - - - - - - 8 9 0
Rosa spinosissima	1 2 3 4 5 6 - 8 9 0	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 -	1 - 3 4 5 6 7 8 9 0
involuta	- - 3 - - 6 - - - -	- - - - - 6 - - - -	- - - - - 6 - - - -	- - 3 - - - - 8 9 0
hibernica	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 9 0
mollis	- 2 3 4 - - - - - -	- 2 3 4 5 - - - - -	- 2 - - - - - - - -	1 2 3 - 5 6 7 8 9 0
tomentosa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
rubiginosa	1 2 3 4 - - 7 8 9 0	- 2 3 4 5 - - - - 0	- 2 3 - - - - - - 0	1 - 3 4 - 6 7 8 9 0
micrantha	- 2 3 4 5 - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
sepium	- - - - - - - - - 0	- - - - 5 - - - - -	- - 3 - - 6 - - - -	- - - - - - - - - -
canina	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
glauca	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - 7 8 9 0
arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 - 7 8 9 -	1 2 3 4 5 - 7 8 9 0

	1—10	11—20	21—30	31—40
Pyrus Aria	- 2 - - - - 7 8 9 0	1 2 3 4 5 6 7 8 - 0	1 - 3 4 5 6 - 8 9 -	- - - 4 5 - - (8) 9 0
Aucuparia	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Malus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Cratægus Oxyacantha	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Saxifraga oppositifolia	- - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - 7 8 9 -	- - - 4 5 - - - - 0
nivalis	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - 8 - -	- - - - - - - - - -
stellaris	1 2 3 - - 6 7 8 - -	- 2 3 - - 6 - - - 0	1 - - - - - 7 - - -	- - - 4 5 6 - 8 - 0
Geum	1 2 3 - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
umbrosa	1 2 3 4 - 6 7 - - -	- - - - - 6 - - - -	- - - - - 6 7 - - -	- - - 4 5 - - - - -
Hirculus	- - - - - - - - - 0	- - - 4 - - - 8 - -	- - 3 - - - 7 - - -	- - - - - - - - 9 -
aizoides	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 9 -	- - - 4 5 - - - 9 -
tridactylites	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 -	1 2 3 4 5 6 7 8 9 -	- - - 4 5 - - 8 9 0
granulata	- -(3)(4)(5)- - - - -	- - - - - - - - - 0	1 2 - - - - - - - -	- - - - - - 7 8 9 0
hypnoides	- - - - - - - - 9 -	- - - - 5 - (7) - - -	- - - - - - - 8 9 -	- - 3 4 - - - - 9 0
sponhemica	1 2 - - - 6 7 8 - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - 9 0
decipiens	1 2 - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Sternbergii	1 - - - - - 7 - 9 -	- - - - - - - - - -	- - - - - - - - - -	- - - - 5 - - - - -
grænlandica	1 - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -	- - - - - - - - - -
Chrysosplenium oppositifolium	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Parnassia palustris	- - - - - 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 - 9 0
Cotyledon Umbilicus	1 2 3 4 5 6 7 8 9 0	1 2 3 - 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Sedum Rhodiola	1 2 3 - - 6 7 - 9 -	- - - - - 6 - - - 0	- - - - - - 7 8 9 -	1 - - 4 5 - - 8 9 -
‡ Telephium	- 2 - 4 5 - - - 9 -	- 2 3 4 5 6 - - - -	- 2 3 4 - - - 8 - -	- 2 - - 5 6 7 8 9 -
* album	- - 3 4 5 6 7 8 - 0	1 - 3 4 5 - - 8 9 -	- - - - - - - - -	1 - - - - 6 7 - 9 -
* dasyphyllum	- 4 5 - - - - -	- - - - - - - - -	- - - - - - - -	- - - - - - - - -
anglicum	1 2 3 4 5 6 8 9	1 2 3 0 7 0	1 4 5 6 7 8 - 0	1 2 4 5 6 7 8 9 0

*Sempervivum tectorum	1 2 3 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 - -	1 2 3 4 5 6 - - 9 0	1 2 - 4 5 6 7 8 9 0
Drosera rotundifolia	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
anglica	1 2 3 4 - - 7 8 9 0	1 - - 4 5 6 7 8 9 -	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
intermedia	1 2 3 - - - - - 9 0	- - - 4 5 6 7 - - -	- - - - 5 6 7 8 9 -	- - 3 4 5 - 7 8 - -
Hippuris vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Myriophyllum verticillatum	- - - 4 5 6 7 8 - 0	1 - 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - - - -	1 - - 4 - 6 - - 9 -
spicatum	1 2 3 4 5 6 - 8 - 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 - 7 8 9 0	- - 3 4 5 6 7 8 9 0
alterniflorum	1 2 3 4 5 - 7 8 9 0	1 2 3 4 5 6 7 8 9 -	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Callitriche verna (*aggr.*)	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
vernalis	- - - - - - - - - -	- 2 - - - - - - - -	1 - - - - - - - - -	- - - - - 6 7 8 9 0
stagnalis	1 2 3 4 5 6 7 - - 0	1 2 3 - 5 6 - - 9 0	1 2 - - - 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
hamulata	1 2 3 4 5 6 7 8 - -	- 2 - - - 6 - - - 0	1 - 3 - - - 7 - - -	- 2 3 - 5 - 7 8 9 0
obtusangula	- 2 3 - 5 - - - - 0	- 2 - - - - - - 9 0	- - 3 - - 6 7 - - 0	- - - - - - - 8 - -
autumnalis	- 2 - - - - - - - -	- 2 - - 5 - - - - -	- - - - - 6 - 8 - -	- 2 - 4 5 6 7 8 9 0
Peplis Portula	1 2 3 4 5 6 - - 9 0	- 2 3 4 - 6 - - - 0	1 - - 4 - 6 7 8 9 0	1 2 - 4 5 6 7 8 9 0
Lythrum Salicaria	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Epilobium angustifolium	- - - - - - - - - -	- - - - - - - - (8) - 0	- - (3) - - - - - 9 -	- - - 4 5 - (7) 8 9 0
hirsutum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
parviflorum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
montanum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
† roseum	- - - - - - - - - -	- - - - - - - - - -	1 - - - - - - - - -	1 - - - - - 7 8 9 -
obscurum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
palustre	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
alsinefolium	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - 9 -	- - - - - - - - - -
Circæa lutetiana	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
alpina	- - - - - - - - - -	- - - - - (6) - - - (0)	- - - - - - - 8 9 -	1 - 3 4 5 6 7 8 9 0
Hydrocotyle vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0

	1—10	11—20	21—30	31—40
Eryngium maritimum	1 2 3 – 5 6 – – 9 –	– 2 – – 5 6 – – – 0	1 2 – – – – – – – –	1 – – 4 5 – – 8 9 0
Sanicula europæa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Conium maculatum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
‡Smyrnium Olusatrum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 – – 8 9 0	1 2 3 4 – 6 7 8 – –	1 2 3 4 5 6 7 8 9 0
Apium graveolens	1 2 3 4 5 6 – 8 9 –	1 2 – – 5 – 7 – – 0	1 2 – – – – 7 8 – –	1 – – 4 5 – 7 8 9 0
nodiflorum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
inundatum	1 2 3 4 5 – 7 8 9 0	1 2 – 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Cicuta virosa	– – – – – – – – – –	– – – – – – 7 – – –	– 2 3 4 5 – – – 9 0	1 2 3 – – 6 7 8 9 0
*Petroselinum sativum	1 2 3 4 5 6 7 8 – –	1 – – 4 – – – – – –	1 – 3 4 – – 7 8 – 0	– – 3 – 5 – – 8 – –
Carum verticillatum	1 2 3 – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – 5 – – – 9 0
* Carui	– – 3 – – 6 – – – –	– – – – – – 7 – – 0	– – 3 4 5 6 7 8 – –	– 2 3 4 5 – 7 8 9 0
Sium latifolium	– – – – – – – 8 9 0	– – – – 5 – 7 8 – –	– – 3 4 5 – – – – 0	(1) – 3 (4) – – – – (9) (0)
angustifolium	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 – 7 8 9 0	1 2 3 4 5 6 – 8 9 0	1 2 3 4 (5) – – 8 9 0
‡Ægopodium Podagraria	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Pimpinella Saxifraga	– 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 – 8 – 0	1 – 3 4 5 6 7 8 9 0
magna,	1 2 3 4 5 6 7 8 9 0	– – – 4 – 6 – – – –	– – – – – 6 7 – – –	– – – – – – – – – –
Conopodium denudatum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Myrrhis odorata	– – – – – – – – – –	– – – – – 6 – – – –	– 2 3 – – – – 8 9 –	– 2 – 4 5 6 7 8 9 0
Chærophyllum temulum	– – – – – – – 8 9 0	1 – 3 4 – – – 8 9 0	1 2 – 4 – – – – – 0	1 – – – – – 7 – 9 0
Scandix Pecten-Veneris	1 2 – 4 5 6 7 8 9 0	1 2 – 4 5 6 – 8 9 –	1 2 – 4 5 6 – 8 – 0	1 2 – 4 5 – 7 8 9 0
Anthriscus vulgaris	– 2 – (4) (5) 6 7 – 9 0	1 2 3 4 5 – 7 8 9 0	1 2 3 4 5 6 – – – –	1 – – (4) – – – 8 9 0
sylvestris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
†Fœniculam officinale	1 2 3 4 5 6 7 8 9 –	1 2 3 – – 6 – – – 0	1 2 – – – – – – – –	– – – – – – – 8 (9) –
Crithmum maritimum	1 2 3 4 5 0 – 8 9 –	1 2 – – – 6 – – – 0	1 – – – – – 7 – – –	1 – – 4 5 – – 8 – –
Œnanthe fistulosa	– – 4 5 6 7 8 9 –	1 2 3 4 5 – 7 8 9 0	1 2 3 4 – – – – – –	1 – – 4 – 6 7 8 9 0
pimpinelloides	– – 5 – – –	– – – – – –	– – – – – – – – – –	– – – – – – – – – –
			– – – – 7 8 – –	1 – – 4 6 – – 8 9 0

Æthusa Cynapium	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 – – 9 0	1 – 3 4 5 6 7 8 9 0
Ligusticum scoticum	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – 4 5 – – 8 9 0
Angelica sylvestris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Peucedanum sativum	– 2 3 4 5 6 7 8 9 –	1 2 – 4 5 6 – 8 9 0	1 2 – – 5 – 7 – – –	– – 3 4 5 – – – 9 0
Heracleum Sphondylium	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Daucus Carota	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Caucalis Anthriscus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
nodosa	1 2 3 4 5 6 7 8 9 0	1 2 3 – 5 – 7 – – 0	1 – 3 4 5 – – – – –	1 – – 4 – – 7 8 9 0
Hedera Helix	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Cornus sanguinea	– –(3)(4)(5)– – 8 9 0	1 – 3 – 5 – – 8 9 –	– – 3 – 5 – – 8 9 –	– (2) – 4–(6)(7) – – –
Adoxa Moschatellina	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – 9 –
Sambucus nigra	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
* Ebulus	1 2 3 4 5 6 7 8 9 0	1 2 3 – 5 – 7 8 – 0	1 – – – 5 6 7 8 9 –	– 2 3 4 5 6 7 8 9 0
Viburnum Opulus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Lonicera Periclymenum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Rubia peregrina	1 2 3 4 5 6 – 8 9 –	– 2 – – 5 6 7 – – 0	1 – – – – 6 7 – – –	– – – – – – – – – –
Galium boreale	1 2 – – – 6 – – 9 0	– – – – 5 6 7 – – –	– – 3 4 5 6 7 8 9 –	– – 3 4 5 6 7 – 9 0
† Cruciata	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – 3 – – – – – 8 – –
verum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
‡ erectum	– – – – 5 – – – 9 –	– 2 – – – – – – 9 –	1 – 3 – – – – – – –	– – – – – – – 8 9 –
† Mollugo	– – – – – 6 7 – 9 0	– 2 – 4 – – – 8 – 0	1 2 – 4 – – – – – –	1 – – – 5 6 7 – – 0
saxatile	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
sylvestre	– 2 – – – – – – 9 –	– – – – 5 – 7 – – –	– – – – – – – 8 9 –	– – – – – – – – – –
palustre	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
uliginosum	– 2 – – 5 – 7 – – 0	– – 3 – 5 – 7 8 9 0	– – 3 4 5 – – – – –	– – – – – – – – – –
Aparine	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Asperula odorata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 – 8 9 0	1 2 3 4 5 6 7 8 9 0

	1—10	11—20	21—30	31—40
Asperula cynanchica	1 2 - - - 6 - 8 9 -	- - - - 5 6 7 - - -	- - - - - - - - - -	- - - - - - - - - -
Sherardia arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Valeriana *sambucifolia*	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Mikanii	1 2 3 4 5 - 7 - 9 -	- - - - 5 - - 8 - -	- 2 - - - - - 8 - -	- - - - - - - 8 9 -
*Centranthus ruber	- - 3 4 5 6 - - - -	1 2 - - - - - - - -	1 - - - - - - - - -	1 - - 4 - - - - - -
Valerianella olitoria	1 2 3 4 5 6 7 8 9 -	1 2 3 4 - 6 - - 9 0	1 2 - 4 5 - - - - -	1 - - 4 5 6 7 8 9 0
‡ Auricula	- - 3 4 5 6 - - - 0	1 2 3 4 5 6 - 8 - -	1 2 - 4 - 6 - - - -	1 - - - - - - - - -
‡ dentata	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 - - - - 0	1 2 3 - 5 - 7 8 9 0
Dipsacus sylvestris	- 2 3 4 5 6 7 8 9 0	1 2 - - - - 7 - - 0	1 2 - - - - - - - -	1 - - - - - - 8 - -
Scabiosa Succisa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 - 0	1 2 3 4 5 6 7 8 9 0
Eupatorium cannabinum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Solidago Virgaurea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0
Bellis perennis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Aster Tripolium	1 2 3 4 5 6 - 8 9 -	1 2 3 - 5 6 7 - - 0	1 2 - - - - 7 8 9 -	1 - - 4 5 6 7 8 9 0
Erigeron acre	- - - - - - 7 - 9 0	1 2 3 4 5 6 - 8 9 0	1 - 3 4 - 6 - - - -	- - - - - - - 8 - -
Filago germanica	1 2 3 4 5 6 7 - 9 0	1 2 3 4 5 6 - - - 0	1 2 - 4 - 6 7 - - 0	1 2 - 4 5 6 7 8 9 0
minima	1 2 3 4 5 - 7 - - -	- 2 3 - - 6 - - - 0	1 2 - - - - - - - -	- - - 4 - 6 7 8 9 0
Antennaria dioica	1 2 3 - 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Gnaphalium uliginosum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 - - 0	1 2 - 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
sylvaticum	1 2 3 4 5 6 - - 9 -	- 2 3 4 5 6 7 - 9 0	1 2 - - - 6 7 8 - 0	1 2 3 4 5 6 7 8 9 0
*Inula Helenium	1 2 3 - 5 6 7 - 9 -	- 2 - - 5 6 - - - 0	- - - - - 6 7 8 - -	- - 3 4 5 6 7 8 9 0
salicina	- - - - - - - - - 0	- - - - 5 - - - - -	- - - - - - - - - -	- - - - - - - - - -
crithmoides	1 - 3 - - 6 - - - -	- 2 - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
Pulicaria dysenterica	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Bidens cernua	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 -	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0

Diotis candidissima	- - - - - 6 - - - -	- 2 - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
‡Anthemis Cotula	1 2 - 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 -	1 2 3 4 5 - 7 - - -	- 2 3 4 - - 7 8 9 -
nobilis	1 2 3 4 5 6 - - - -	- 2 3 4 - 6 - - - 0	1 - 3 - - 6 7 - - -	- - - 4 5 - 7 8 9 0
Chrysanthemum segetum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Leucanthemum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Matricaria inodora	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
* discoidea	- - - - - - - - - 0	- - - - 5 6 7 8 - -	1 2 3 4 5 6 7 - - 0	1 2 - - - - 7 - - -
*Tanacetum vulgare	1 2 3 4 5 6 7 8 9 -	1 2 3 4 - 6 - 8 9 0	1 2 3 4 5 - - - - -	1 - 3 4 5 6 7 8 9 0
‡Artemisia Absinthium	1 - 3 - 5 6 - - 9 -	1 2 3 4 5 6 7 - 9 0	1 - - - - - - - - -	1 - - - 5 - - 8 - -
vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
maritima	- - - - - - - 8 9 -	- - - - 5 6 - - - -	1 2 - - - - - - - -	1 - - - - - - - - -
Tussilago Farfara	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Petasites fragrans	1 - 3 4 5 6 7 8 9 0	1 2 3 4 5 - - 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 - 4 5 6 - 8 9 -
officinalis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Senecio vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
sylvaticus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 - 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0
* squalidus	- - 3 4 5 - - - - -	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
erucifolius	- - - - - - - - - -	- - - - - - - - 9 0	1 2 - - - - - - - -	1 - - - - - - - - -
Jacobæa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
aquaticus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
* saracenicus	- - 3 - - - 7 - 9 -	- - - 4 - - - - 9 0	- - - - - - - - - -	- - - 4 - 6 7 8 9 0
Carlina vulgaris	- - - 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 - - 0	- - - - 5 - - 8 9 -
Arctium majus	- - - - - - - - - -	- - - - - - - - - -	1 2 - - 5 - - - - 0	1 - - - - - 7 - - -
nemorosum	- - - - - - - - - -	- - - - - - - - - -	1 - - - - - - 8 - -	- - 3 - - - 7 8 9 0
minus	1 2 3 4 5 - - 8 9 0	- 2 3 4 5 6 - - 9 0	1 - 3 4 5 6 7 8 9 -	1 - 3 4 5 - - 8 9 -
intermedium	1 2 3 4 5 - - 8 9 0	- - 3 4 5 6 7 - - 0	1 2 - 4 5 6 7 8 9 -	1 - - - 5 6 - 8 9 0
Carduus pycnocephalus	1 2 3 4 5 6 7 8 9 -	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6(7)8 - -	1 - - 4 - - - 8 9 0

	1—10	11—20	21—30	31—40
Carduus nutans	- - - - 5 - - - 9 -	- 2 - - 5 - - - - -	- - - - - 6 - - - -	- - - - - - - - - -
crispus	- - - - - - - - 8 9 -	1 - - 4 5 - - 8 9 -	1 2 3 4 - - - - - 0	1 2 - 4 - - 7 8 9 0
Cnicus lanceolatus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
palustris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
pratensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Silybum Marianum	1 2 3 4 5 6 7 8 9 0	1 2 - 4 - 6 - - 9 0	1 - - - - - - - - -	1 - - - - 6 7 8 9 0
Saussurea alpina	1 2 - - - - 7 - - -	- - - - - 6 - - - 0	- - - - - - 7 - - -	- - - 4 5 - - 8 - -
Centaurea nigra	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Scabiosa	- - - 4 5 6 7 8 9 -	1 2 3 4 5 6 7 - 9 0	1 2 3 - 5 6 - - - -	1 - - - - - - - - -
* Cyanus	1 2 3 4 5 6 - - 9 0	- 2 - - - - - - - -	- - 3 - - - - - 9 -	1 2 3 4 5 6 7 8 9 0
*Cichorium Intybus	- - 3 4 5 6 - 8 9 -	1 2 3 - 5 6 - 8 9 0	1 2 - - - 6 7 - - -	1 - - 4 5 - - 8 9 0
Lapsana communis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
†Picris echioides	- - - 4 5 6 - - - -	- 2 - - - - - - - -	1 2 - - - - - - - -	- - - - - - - - 9 -
‡ hieracioides	- - - - - - 7 - - -	- - 3 4 - - - - - -	- - - - - - - - - -	- - - - - - - - - -
†Crepis taraxacifolia	- - - - - 6 7 8 9 0	1 - 3 4 5 6 - - 9 0	1 - 3 4 5 6 - - - -	- - 3 - - - - - - -
virens	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
* biennis	- - - 4 5 6 - 8 - 0	- - - - - - - 8 - 0	- - - 4 - - - (8) - -	- 2 - - - 6 7 8 9 -
paludosa	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - 8 9 0	1 2 3 - 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Hieracium Pilosella	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
senescens	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 - -
anglicum	1 2 3 - - 6 7 - 9 -	- - - - - 6 - - - 0	- - - - - - 7 8 9 0	1 - 3 4 5 - - 8 9 0
cerinthiforme	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - 5 - - - - -
iricum	1 2 3 - - - - - 9 -	- - - - 5 6 7 - - -	- - - - - - 7 8 9 -	1 - - 4 5 - - - 9 0
flocculosum	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 9 -
Levi	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - 0
	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 9	- - - 4 5 - - 8 9 -

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proximum	- - - - - - - - -	- - - - - - - - 9 0	- - - - - - - - - -	- - - 4 - - - - - -
rubicundum	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - 4 5 - - - 9 -
argenteum	- - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -	- - - 4 5 - - 8 - -
Sommerfeltii	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - 5 - - - - 0
scoticum	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - 5 - - - - -
saxifragum v. *orimeles*	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - 4 5 - - - - -
hibernicum	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - 4 - - - 8 - -
murorum	- 2 - - 5 - - - 9 -	- - - 4 - - - - 9 -	- - - - - - - 8 - -	1 - - - - - 7 8 9 0
stenolepis	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 9 -	- - - - - - - - 9 0
euprepes	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - 9 0
cæsium	- - - - - - - - 9 -	- - - - - - - - - 0	- - - - - - - 8 - -	- - - 4 5 - - - 9 0
hypochæroides	- - 3 - - - - - 9 -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
vulgatum	1 2 - - - - - - - -	- - - 4 - 6 7 - 9 0	1 - - - - - 7 - - 0	1 - - 4 - 6 - 8 9 0
sciaphilum	- - - - - - 7 - - -	- - - - - - - - 9 -	- - - - - - - - - -	- - - - 5 - - 8 - -
gothicum	- - 3(4) - - - - - -	- - - - - 6 - - - 0	- - - - - - - - - -	- - - - 5 - - 8 9 -
sparsifolium	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - 4 5 6 - - - -
rigidum	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - 3 - 5 - - - - -
prenanthoides	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - 0
strictum	- - - - - - - - - -	- - - - - - - - - 0	- - - - - - - - - -	- - - 4 5 - - - 9 0
corymbosum	- - - - - - - - - -	- - 3 - - - - - - 0	- - - - - - - - - -	1 - - 4 5 - - 8 9 0
auratum	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - 4 5 - - 8 9 -
crocatum	- - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -	1 - - 4 - - - 8 9 0
boreale	1 - 3 - - - - - - -	1 - 3 4 - - - - 9 0	1 - 3 - - - - - - -	- - - - - - - 8 9 0
umbellatum	1 2 3 - - - - - 9 0	1 - - - 5 6 - - - 0	1 - 3 - - - 7 - - -	- - 3 4 5 - - - 9 0
Hypochæris radicata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
glabra	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - 0
Leontodon hirtus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 - 3 4 5 - 7 8 9 -

	1—10	11—20	21—30	31—40
Leontodon hispidus	1 2 (3) 4 5 6 7 8 – 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 – – – –	– – – – – – – – – –
autumnalis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Taraxacum officinale	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
‡Lactuca muralis	– 2 – 4 – – – – – –	– – – – – – – – 9 0	1 – 3 – – – – – – –	1 – – – – – – – – –
Sonchus oleraceus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
asper	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Tragopogon pratensis	– – – – 5 – 7 8 – 0	1 – 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 – – –	1 2 – – – – – – – –
Lobelia Dortmanna	1 2 3 – – 6 – – 9 –	– – – – 5 6 7 – – 0	– – – – – 6 7 8 – –	– – – 4 5 – 7 8 9 0
Jasione montana	1 2 3 4 5 6 7 – 9 0	1 2 3 4 – 6 – 8 9 0	1 – – – – 6 7 8 – –	1 2 – 4 5 – 7 8 9 0
Wahlenbergia hederacea	1 2 3 4 – – – – – –	– 2 – – – – – – – 0	1 – – – – – – – – –	– – – – – – – – – –
Campanula Trachelium	– – – – – – – – – –	1 – 3 4 – – – 8 – –	– – – – – – – – – –	– – – – – – – – – –
* rapunculoides	– – – – – – – – – –	1 – – – – – – – – 0	1 2 – 4 – – – – – –	1 – – – – 6 – 8 9 0
rotundifolia	1 2 3 – – 6 – – 9 0	– – – – 5 6 7 – – 0	1 – 3 4 5 6 7 8 9 0	1 – 3 4 5 6 7 8 9 0
Vaccinium Vitis-Idæa	– – – – – 6 7 – – 0	– – 3 – – – – – – 0	1 – 3 – – – 7 8 – 0	1 – 3 4 5 6 7 8 9 0
Vaccinium Myrtillus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Oxycoccus	1 2 3 – – 6 7 – 9 0	1 – 3 4 5 – 7 8 9 0	– 2 3 4 5 6 7 8 9 –	1 – – 4 – 6 7 8 9 0
Arbutus Unedo	1 2 3 – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –
Arctostaphylos Uva-ursi	– – – – – – – – 9 –	– – – – 5 6 – – – –	– – – – – – 7 – – –	– – – 4 5 – – – 9 –
Andromeda Polifolia	– – – – – – 7 8 9 0	1 – 3 4 5 – 7 8 9 0	1 2 3 4 5 6 – 8 9 0	1 – – – – – 7 8 – –
Calluna vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Erica Tetralix	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Mackaii	– – – – – – – – – –	– – – – – 6 – – – –	– – – – – – – – – –	– – – – – – – – – –
cinerea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 – – 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
mediterranea	– – – – – – – – – –	– – – – – 6 – – – –	– – – – – – 7 – – –	– – – – – – – – – –
Daboecia polifolia	– – – – – – – – – –	– – 6	– – – 6 7	– – – – – – – – – –
[illegible]	– – – – – – – – – –	– – – – – – (9) – –	– – – 8 – –	– – – – – – – – – –

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secunda	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Hypopithys multiflora	- 2 - - - - - - 8 - -	- - - - 5 - - - 9 -	1 - - - - - - - 8 - -	- - - - - - - - - -
Statice rariflora	1 2 3 4 5 6 - 8 9 -	1 2 - - 5 6 - - - 0	1 2 - - - - 7 - - -	1 - - - 5 - 7 8 9 -
occidentalis	- 2 - - 5 6 - - 9 -	- 2 - - - - - - - 0	1 2 - - - - - - - -	1 - - 4 5 - - - - -
Armeria maritima	1 2 3 4 5 6 - 8 9 -	1 2 - - 5 6 7 - - 0	1 2 - - - - 7 8 9 -	1 - - 4 5 6 7 8 9 0
‡Hottonia palustris	- - - - - - - - - -	- - - - - - - - - -	(1) - - - - - - - - -	- - - - - - - - 8 (9) -
Primula vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
officinalis	1 2 3 4 5 - 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - 8 9 0	1 - 3 - 5 - 7 8 9 0
Lysimachia vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
* Nummularia	- - 3 - - 6 - - 9 -	1 2 3 - - - 7 - 9 -	- 2 - - 5 - - - 9 -	1 - 3 4 5 6 7 8 9 0
nemorum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Glaux maritima	1 2 3 4 5 6 - 8 9 -	1 2 - - 5 6 7 - - 0	1 2 - - - - 7 8 9 -	1 - - 4 5 6 7 8 9 0
Anagallis arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
tenella	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Centunculus minimus	1 - 3 4 5 - - - 9 -	- - - - - 6 - - - -	- 2 - - - - 7 8 - -	- - 3 - 5 - 7 8 9 0
Samolus Valerandi	1 2 3 4 5 6 - 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Fraxinus excelsior	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Ligustrum vulgare	- - - - - 6 - - - -	- - - - 5 - - - - -	1 - - - - - - - - -	- - - - - - - - - -
Microcala filiformis	1 2 3 - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Chlora perfoliata	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - - - -	- - - - - - - - - -
Erythræa Centaureum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
pulchella	- - 3 - 5 6 - - - -	- 2 - 4 - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
Gentiana verna	- - - - - - - - 9 -	- - - - 5 6 7 - - -	- - - - - 6 - - - -	- - - - - - - - - -
Amarella	- - 3 4 5 - 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 - 0	1 - 3 4 - - - - (9)(0)
campestris	1 2 3 4 5 6 - 8 9 0	- 2 - - 5 6 7 8 - 0	1 2 3 4 - 6 7 8 - -	1 - 3 4 5 - - 8 9 0
Menyanthes trifoliata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Cynoglossum officinale	- - - 4 5 6 7 - - -	1 2 3 4 - - - - 9 0	1 2 - - - - - - - -	1 - - - - - - 8 - -

	1—10	11—20	21—30	31—40
‡Symphytum officinale	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 – 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Anchusa sempervirens	– – – – (5) – – – – –	– – – – – – – – – 9 –	1 – – – – – – 8 – –	– – – 4 5 6 7 8 9 0
Lycopsis arvensis	– – – – – – 7 – – –	1 2 – – – – – – – 0	1 2 – – – – – 8 – –	1 – – 4 5 6 – 8 9 0
Mertensia maritima	– – – – – – – – – –	– – – – – – – – – 0	(1) – – – – – – – – –	1 – – 4 5 – – 8 9 0
Myosotis cæspitosa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
palustris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
repens	1 2 3 4 5 6 7 – 9 0	1 2 3 – – 6 – – 9 0	1 2 – 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
collina	– – – – – 6 – – – –	– 2 3 – – – 7 – – 0	1 2 – – – 6 – – – –	– – – – 5 – – 8 9 0
versicolor	1 2 3 4 5 6 7 8 9 0	1 2 3 – 5 6 7 8 9 0	1 2 – 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Lithospermum officinale	– – 3 4 5 6 7 8 9 –	1 2 – 4 5 6 7 8 9 0	1 2 3 4 – – 7 8 – –	1 2 – 4 5 6 7 – 9 0
arvense	– – 3 4 5 6 – – – –	1 2 3 – 5 – – – – –	1 2 3 4 5 – – – – –	– 2 – – – – 7 8 9 –
Echium vulgare	– – 3 4 5 6 7 8 – –	1 2 – 4 5 – – – – 0	1 2 – – – – – – – –	1 – – – – – – 8 9 (0)
Calystegia sepium	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Soldanella	1 2 3 – 5 6 – – 9 –	– 2 – – – – – – – 0	1 2 – – – – – – – –	1 – – (4) 5 – – 8 9 –
Convolvulus arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 – 5 6 7 – 9 0	1 2 3 4 5 6 – 8 – 0	1 2 3 4 5 6 7 8 9 0
‡Cuscuta Epithymum	– 2 – – – 6 – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – 5 – – – – –
‡ *Trifolii*	– – – – (5) – – 8 9 –	– 2 – – – – – – (9) 0	1 – – – – – – 8 – –	1 – – – – – – – – –
Solanum Dulcamara	1 2 – 4 5 6 7 8 9 –	1 2 3 4 5 6 7 8 9 0	1 2 – 4 5 6 – – 9 –	1 2 3 4 5 6 7 8 9 0
* nigrum	1 2 3 – 5 6 – – – –	– 2 – – – 6 7 8 (9) 0	(1) – 3 – – 6 – – – –	– – – – – – – (8) (9) –
*Lycium barbarum	– – 3 – – 6 – – – –	– 2 – – – – – – – –	1 – – – – – – – – –	– – – 4 – – – – – –
Hyoscyamus niger	1 2 3 4 5 6 – 8 9 0	1 2 3 4 – 6 7 8 9 0	1 2 – 4 – 6 – 8 – –	1 – – 4 – 6 7 8 9 0
Verbascum Thapsus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 – 7 8 – 0	1 2 3 4 5 6 7 – – –	1 – – 4 – 6 7 8 9 0
*Linaria Cymbalaria	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 – 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
‡ Elatine	– – 3 4 5 6 – 8 9 0	– 2 – – 5 – – – – –	– – – – – – – – – –	– – – – – – – – – –
[illegible]	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – 5 – 7 8 – –
[illegible]	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – 7 8 9 0

Scrophularia aquatica	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 –	1 2 – 4 5 – 7 8 9 0
umbrosa	– – – – – – – – – –	– – – – – – – – 9 –	1 – – – – – – – – –	– – – – – – – – – –
nodosa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Mimulus guttatus	1 2 3 4 – 6 7 8 9 –	1 – – – – – – – – 0	1 – – – – – – – 9 –	– 2 3 4 5 6 – 8 9 0
Limosella aquatica	– – – – – – – – 9 –	– – – – 5 – – – – –	– – – – – – – – – –	– – – – – – – – – –
Sibthorpia europæa	1 2 – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –
Digitalis purpurea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Veronica hederæfolia	1 2 3 4 5 6 7 – 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 – – 9 0	1 – 3 4 5 6 7 8 9 0
agrestis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 – 3 4 5 6 7 – 9 0	1 2 3 4 5 6 7 8 9 0
polita	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 – 4 5 6 7 8 9 0	– – – 4 5 6 7 8 9 0
* Tournefortii	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
serpyllifolia	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
officinalis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Chamædrys	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
montana	1 2 3 4 5 – 7 – 9 0	1 2 3 4 5 6 7 8 9 0	1 – 3 4 5 6 7 8 9 0	1 – 3 4 5 6 7 8 9 0
scutellata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 – 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Anagallis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 –	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Beccabunga	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
* peregrina	– – – – – – – – – –	– – – – 5 – – – – –	– – – – 5 – – 8 – –	– 2 – 4 5 6 – – (9) 0
Euphrasia officinalis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Salisburgensis	– – – – – – – 8 9 –	– – – – 5 – 7 – – –	– – – – – 6 – – 9 –	– – – – – – – – – –
Bartsia Odontites	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
viscosa	1 2 3 4 5 6 – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – 4 – – – – – –
Pedicularis palustris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
sylvatica	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Rhinanthus Crista-galli	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0

	1—10	11—20	21—30	31—40
Melampyrum pratense	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 – 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
sylvaticum	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – (5) – – – 9 0
Orobanche major	– – 3 4 5 – – – – –	– 2 – – – – – – – 0	(1) – – – – – – – – –	– – – – – – – – – –
rubra	– – – – – – – – 9 –	– – – – – 6 – – – –	– – – – – – – – – –	– – – – 5 – – – 9 0
Hederæ	1 2 – 4 5 6 7 8 9 –	1 2 3 4 5 6 – – 9 0	1 – – – 5 6 – 8 9 –	1 – – 4 5 – – – – –
* minor	– – 3 4 5 6 7 – – 0	1 2 3 4 – – – – 9 0	1 2 – – – – – – – –	1 – – – – – – 8 – –
Lathræa squamaria	– 2 3 4 5 6 7 8 9 –	1 – 3 4 5 6 – 8 – 0	1 2 3 – 5 – – – – –	1 – 3 – – 6 7 8 9 0
Utricularia vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 (6) 7 8 9 0	(1) 2 3 4 5 6 7 8 9 0	1 2 – 4 5 6 7 8 9 0
neglecta	1 2 – 4 – – – – – –	– – – – – – – – – –	1 – – – – – – – – –	– – – 4 – – 7 – – –
minor	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	– 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
intermedia	1 2 3 (4) – – 7 – 9 0	– – – – 5 6 7 8 9 –	– – 3 – 5 6 7 8 – 0	– – 3 4 5 – – – 9 0
Pinguicula vulgaris	1 2 3 – – – 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
grandiflora	1 2 3 4 5 – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –
lusitanica	1 2 3 4 5 6 7 8 9 –	1 2 3 4 5 6 7 – – 0	1 – – – 5 6 7 8 9 –	1 – – 4 5 6 7 8 9 0
‡Verbena officinalis	1 2 3 4 5 6 7 8 9 0	1 2 3 – 5 6 7 – 9 0	1 2 – – – 6 – – – –	1 – – 4 – – – 8 – –
‡Mentha rotundifolia	1 2 3 4 5 6 7 – – –	1 2 – 4 – – 7 – – 0	1 – – – – 6 7 – – –	– – – – – – 7 8 9 –
‡ piperata	1 – 3 4 5 6 – 8 – –	1 – 3 4 – 6 7 – 9 –	1 – – – 5 6 – – 9 0	– – – 4 5 6 7 8 9 0
hirsuta	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
sativa	1 2 3 4 5 6 7 8 – 0	1 2 3 4 5 – – 8 9 0	1 2 – 4 5 6 7 8 9 0	1 – 3 4 5 6 7 8 9 0
arvensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
† Pulegium	1 2 3 4 5 – – 8 9 –	– 2 – – – – – – – 0	(1) – – – – – – – – –	– – – – – – – (8) 9 0
Lycopus europæus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 –	1 2 3 4 5 – 7 – 9 0	1 2 3 4 5 6 7 8 9 0
Origanum vulgare	1 – 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 – – 0	1 – – 4 – 6 7 8 9 0
Thymus Serpyllum	1 2 3 4 5 6 7 8 9 0	1 2 – 4 5 6 7 8 9 0	1 2 – 4 5 6 7 8 9 0	1 2 3 4 5 – 7 8 9 0
Chamædrys	– 2 – – 5 – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –
†Calamintha Acinos	– – – – – 7 – 0	2 4 9 0	1 4 – –	– – – –
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Glechoma	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Scutellaria galericulata	1 2 3 4 5 6 7 - 9 -	- 2 3 4 5 6 7 - - 0	1 2 3 4 5 6 - 8 9 0	- 2 3 4 5 6 7 8 9 0
minor	1 2 3 4 5 6 7 - 9 -	1 2 3 - - 6 - - - 0	1 - - - - 6 7 - - -	- - - - - - - - - -
Prunella vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Marrubium vulgare	1 2 - 4 5 - - - 9 0	1 2 - - - 6 - - - 0	1 - - - - - - - - -	- - - - - - - - - -
Stachys Betonica	1 2 - - - 6 - - - -	1 2 - - - - - - - -	- - 3 4 - - - - - -	- - - - 5 - 7 - 9 0
palustris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
sylvatica	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
arvensis	1 2 3 4 5 6 7 - 9 -	1 2 3 - 5 6 - 8 - 0	1 - - - - 6 7 - - -	1 - - 4 5 6 7 8 9 0
Galeopsis Ladanum (*aggr.*)	- - - - (5) - - - - -	1 (2) 3 4 - - - - 9 0	1 2 - - - - - - - -	- - - - - - - - - -
intermedia	- - - - - - - - - -	- - - 4 - - - - - -	- 2 - - - - - - - -	- - - - - - - - - -
angustifolia	- - - - - - - - - -	- - 3 4 - - - - 9 0	1 2 - - - - - - - -	- - - - - - - - - -
versicolor	- - - - (5) - - - - -	1 2 3 4 - 6 - - - -	(1) 2 - - - 6 7 8 - -	1 2 - 4 5 6 (7) 8 9 0
Tetrahit	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Lamium amplexicaule	1 - 3 4 5 - - - 9 -	- 2 3 4 - - - - 9 0	1 2 - 4 - 6 - 8 - -	1 - - 4 5 6 7 8 9 0
intermedium	- - - 4 - - 7 8 - 0	- - - - 5 - 7 - - 0	1 - - 4 - 6 7 8 9 -	- - - 4 5 6 7 8 9 0
purpureum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
hybridum	1 2 3 4 5 - 7 - - -	- 2 - 4 5 - 7 - 9 -	1 - - 4 - - - - 9 -	- - - 4 5 6 7 8 9 0
album	- - (3)(4)(5) 6 - - - -	1 2 - 4 5 - - 8 9 0	1 2 3 4 5 - - 8 - 0	1 2 - 4 - 6 7 8 9 0
Galeobdolon	- - - - - - - - - -	- 2 - - - - - - - 0	1 - (3) - - - - - - -	- - - - - - - - - -
‡ Ballota nigra	- - 3 4 5 6 7 - - 0	1 2 - 4 - - - 8 9 0	1 2 3 - - 6 - - - 0	1 - - 4 5 - - 8 9 0
Teucrium Scordium	- - - - - - - - (8) 9 0	- - - - 5 - - - - -	- - 3 4 5 - - - 9 -	- - - - - - - - - -
Scorodonia	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 - - 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Ajuga reptans	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
pyramidalis	- - - - - - - - 9 -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Plantago major	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
* media	- - - 4 5 - - - 9 -	1 2 - - - 6 - - 9 -	1 - - - - 6 - 8 - -	- - - - 5 6 - - 9 0

	1—10	11—20	21—30	31—40
Plantago lanceolata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
maritima	1 2 3 4 5 6 – 8 9 –	1 2 – – 5 6 7 – – 0	1 2 – – – – 7 8 9 –	1 – – 4 5 6 7 8 9 0
Coronopus	1 2 3 4 5 6 – 8 9 –	1 2 – – 5 6 7 – – 0	1 2 – – – – 7 8 9 –	1 – – 4 5 6 7 8 9 0
Littorella lacustris	1 2 3 4 5 6 7 8 9 0	1 – – 4 5 6 7 – 9 0	– 2 3 4 5 6 7 8 9 0	– 2 3 4 5 6 7 8 9 0
Scleranthus annuus	– – 3 4 5 – – 8 – –	1 – – – – 6 – – – 0	1 – – – – – 7 – – –	1 2 – – 5 – 7 8 9 0
Chenopodium album	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
rubrum	1 2 –(4) 5 – – 8 9 –	– 2 – – 5 – 7 – – –	1 2 3 – – – – – – –	1 – – – – – –(8)(9)–
* Bonus-Henricus	1 2 3 4 5 – 7 8 9 –	1 2 – – 5 – – 8 9 0	1 2 3 4 – 6 7 8 9 –	1 – – 4 5 6 7 8 9 0
Beta maritima	1 2 3 4 5 6 – 8 9 –	1 2 – – 5 6 7 – – 0	1 2 – – – – – 8 – –	1 – – 4 5 – 7 8 9 0
Atriplex littoralis	– – – 4 – – – – 9 –	– 2 – – – – – – – 0	1 – – – – – – – – –	– – – – – – – – 8 9 –
patula	1 2 3 4 5 6 7 8 9 0	1 2 – 4 5 6 7 8 9 0	1 2 3 4 5 – 7 8 9 0	1 2 3 4 5 6 7 8 9 0
hastata	– – 3 4 5 6 – 8 9 –	1 2 – – 5 – 7 8 – 0	1 2 – – – – – 8 – –	– – – 4 5 6 7 8 9 0
Babingtonii	1 2 3 4 5 6 – 8 9 –	– 2 – – – 6 7 – – 0	1 2 – – – – 7 8 9 –	1 – – 4 5 – 7 8 9 0
farinosa	– – – – – – – – – –	– – – – – – – – – –	1 2 – – – – – – – –	1 – – – – – – 8 9 –
portulacoides	1 (2) – 4 5 6 – – 9 –	– 2 – – – – – – – –	1 2 – – – – – – – –	1 – – – – – 7 8 – –
Salicornia herbacea	1 2 3 4 5 6 – 8 9 –	1 2 – – 5 6 7 – – 0	1 2 – – – – 7 8 – –	1 – – 4 5 – 7 8 9 0
Suæda maritima	1 2 3 4 5 6 – 8 9 –	– 2 – – 5 6 7 – – 0	1 2 – – – – 7 8 – –	1 – – 4 5 – 7 8 9 0
Salsola Kali	1 2 3 4 5 6 – – – 0	– 2 – – – 6 – – 9 –	1 2 – – – – 7 8 – –	1 – – 4 5 – – 8 9 0
Polygonum Convolvulus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
aviculare	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Raii	1 2 3 – 5 6 – – 9 –	– 2 – – 5 6 – – – 0	1 2 – – – – – – – –	1 – – 4 5 – – 8 9 0
Hydropiper	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 – – 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
minus	– 2 – 4 – – 7 – – –	– – – 4 – – 7 – 9 0	– – – 4 5 6 7 8 9 0	– 2 3 4 5 – 7 8 9 0
mite	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – 9 0	– – – – – – 7 – 9 –
Persicaria	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
lapathifolium	1 2 3 4 5 – 7 8 – 0	3 – 5 6 7 8 – 0	1 2 – 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0

[illegible]	- - - - - - - - - -	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
viviparum	1 - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Oxyria digyna	1 2 - - - - 7 - - -	- - - - - 6 - - - -	- - - - - - 7 8 9 -	- - - - 5 - - - - -
Rumex conglomeratus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
nemorosus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
maritimus	- - - - 5 - - 8 - -	- 2 - - - - - - - -	(1) - - - - - - - - -	- - - - - - - - - -
† pulcher	- - 3 (4) 5 6 - - - (0)	- - - - - - - - - - (0)	(1) - - - - - - - - -	- - - - - - - - - -
obtusifolius	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
crispus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Hydrolapathum	1 - 3 4 5 6 7 8 9 0	1 2 3 4 5 - 7 8 9 0	1 2 3 4 5 - 7 8 9 0	1 2 3 4 - 6 - 8 9 0
Acetosa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Acetosella	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Hippophae rhamnoides	- - - - - - - - - -	- 2 - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
Euphorbia (Peplis)	- - - - - (6) - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Helioscopia	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
hiberna	1 2 3 4 5 6 - 8 - -	- - - - 5 - - - - -	- - - - - - 7 - - -	- - - 4 5 - - - - -
† amygdaloides	- - 3 4 - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - 5 - - - - -
Paralias	1 2 3 - 5 6 - - 9 -	- 2 - - - 6 - - - 0	1 2 - - - - - - - -	1 - - - 5 - - 8 9 -
portlandica	1 2 3 4 5 6 - - 9 -	- 2 - - - 6 - - - 0	1 2 - - - - - - - -	1 - - 4 5 - - 8 9 -
Peplus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
exigua	- - 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 - 4 5 - - - - 0	1 - - 4 5 6 7 8 9 0
Mercurialis perennis	- - - - 5 - - - 9 -	- - - 4 - - - 8 - -	1 - - 4 - - - 8 - -	- 2 - - - - 7 8 9 -
† annua	- - 3 4 5 6 7 - 9 -	1 - - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
Ulmus montana	- - - - - - - 8 - -	- - - - - - - 8 - -	- - - - - - - - - -	- - - 4 5 - - - 9 -
*Humulus Lupulus	1 2 3 4 5 6 7 8 9 0	1 2 - 4 - - - 8 9 0	1 - 3 - - 6 - - - -	- - - - 5 6 7 (8)(9) -
Urtica dioica	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
urens	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Parietaria officinalis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 - 5 6 7 8 - 0	1 - - 4 - 6 7 8 9 0

	1—10	11—20	21—30	31—40
Myrica Gale	1 2 3 4 5 6 7 8 9 0	1 2 – 4 5 6 7 8 9 0	– 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Betula verrucosa	1 2 3 – 5 – 7 – – 0	– – 3 4 5 6 7 – 9 0	– 2 – 4 5 6 – – 9 0	– – – – – – – – – –
pubescens	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Alnus glutinosa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Corylus Avellana	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Quercus Robur	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 – 3 4 5 6 7 8 9 0	1 2 3 4 5 2 7 8 9 0
Salix triandra	– – – – 5 – 7 – – 0	1 2 3 4 – – – – – –	– – 3 – – – – – – –	– – 3 – – – – 8 9 –
pentandra	(1) – (3)(4)– – – – 9 –	1 – – 4 5 6 7 8 9 –	– 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
‡ fragilis	1 2 3 4 5 – 7 – – –	1 2 – 4 – – – – – –	1 – 3 4 – – – – 9 –	– 2 – 4 5 – – – 9 0
† alba	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 – 7 8 9 0	1 2 3 4 5 – 7 8 9 0	1 2 3 4 5 6 7 8 9 0
cinerea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
aurita	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Caprea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
repens	1 2 3 4 5 6 – 8 9 0	1 2 3 4 5 6 7 8 – 0	1 2 3 – 5 6 7 8 – –	1 – 3 4 5 – – 8 9 0
phylicifolia	– – – – – – – – – –	– – – – – – – – – –	– – – – – – 7 8 9 –	– – – – 5 – – – 9 0
nigricans	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – 4 – – – – 9 0
‡ viminalis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
herbacea	1 2 3 – – 6 7 8 – –	– – – – – 6 – – – 0	– – – – – – 7 8 – –	1 – – 4 5 6 – 8 9 0
† purpurea	1 2 3 4 5 6 – 8 – 0	1 – 3 4 5 – 7 8 9 –	1 2 3 4 5 6 7 8 9 0	– 2 3 4 5 6 7 8 9 0
Populus tremula	1 2 3 4 5 6 7 8 9 0	– 2 3 4 – 6 7 8 9 0	– 2 – 4 – 6 7 8 9 0	– – 3 4 5 6 7 8 9 0
Empetrum nigrum	1 2 3 4 – 6 7 – 9 0	– 2 3 4 5 6 – 8 9 0	1 – 3 4 – – 7 – 9 0	– – 3 4 5 6 7 8 9 0
Ceratophyllum demersum	– 2 – 4 – 6 – 8 9 –	– – – – – – – – – –	– 2 3 – – – – – – –	– – – – – – – 8 9 0
Juniperus communis	1 2 3 – – – – – – 0	– – – – 5 6 7 – – –	– – – – – 6 7 8 – –	– – – 4 5 – – – – –
nana	1 2 3 – – – – – – 9 –	– – – – 5 6 – – – –	– – – – – – 7 8 9 –	– – – 4 5 – – 8 9 0
Taxus baccata	1 2 3 4 5 – – – 9 –	– – – – 5 6 7 8 – (0)	– – – (4) – (6) 7 8 9 –	– – 3 – 5 – – – 9 0
*Rhodora canadensis	2 – 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 – 8 9 0	1 2 3 4 – 6 7 8 9 0

Neottia Nidus-avis	1 2 - - 6 - 8 -	1 2 3 - - 6 7 0	1 - 3 - 5 - - 8 - 0	- - 3 4 5 6 7 8 9 0
Listera cordata	1 2 3 - - 6 7 - - -	- 2 - 4 - 6 - 8 - 0	1 2 - - - - 7 8 9 0	1 - 3 4 5 6 7 8 9 0
ovata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Spiranthes autumnalis	1 2 3 4 5 6 7 8 9 0	- 2 - - 5 6 7 - - -	1 - - - - 6 - - - -	- - - - - - - - - -
Romanzoffiana	- - 3 - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - 7 - - 0
Cephalanthera ensifolia	1 2 3 - - 6 - - - -	- - 3 - 5 - - - - 0	- - 3 - - - 7 - - -	- - - - 5 - - (8)(9)-
Epipactis latifolia	- 2 3 - 5 6 7 8 9 0	1 2 - - 5 6 - - - 0	1 2 3 - - 6 7 8 - 0	1 2 3 4 5 6 7 8 9 0
media	- 2 - - - - - - - -	- - - - - - - - - -	1 - 3 - - - - - - -	- - - - - - - - 9 -
atro-rubens	- - - - - - - - 9 -	- - - - 5 6 7 - - -	- - - - - - - - - -	- - - - - - - - - -
palustris	1 2 - - - 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 - 5 6 7 8 9 -	1 - 3 4 5 - - (8)(9)-
Orchis pyramidalis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 -	1 2 3 4 5 - 7 8 9 0
Morio	- - - - - 6 7 - - 0	1 2 3 4 5 6 7 8 9 0	1 2 3 - 5 6 7 - - -	1 - - - - - - - - -
mascula	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
incarnata	1 2 3 4 5 6 7 8 - 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
latifolia	- - - - - 6 - 8 - -	- 2 - - - 6 7 - - -	- - 3 - - 6 7 8 - -	- 2 - - - - - - - -
maculata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Ophrys apifera	- - 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9(0)	1 2 3 - 5 6 7 8 - -	- 2 3 - - - - - - -
muscifera	- - - - - - - - 9 -	1 - - - 5 6 7 8 9 -	- - - - - 6 - - - -	- - - - - - - - - -
Habenaria conopsea	1 2 - 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
intacta	- - - - - - - - 9 -	- - - - 5 6 7 - - -	- - - - - 6 - - - -	- - - - - - - - - -
albida	1 2 3 - 5 6 - - 9 0	- - - 4 5 6 - - - 0	1 - - - - 6 7 8 9 -	- 2 3 4 5 6 - 8 9 0
viridis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - 8 9 0
bifolia	1 2 3 4 5 6 7 8 9 0	1 2 - 4 5 6 7 8 9 0	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - 8 9 0
chloroleuca	1 2 3 4 5 6 7 - 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Iris fœtidissima	1 2 - 4 5 - 7 8 9 0	1 - - 4 5 - 7 8 9 0	1 - - - - 6 - - - -	- - - 4 5 - 7 8 - 0
Pseud-acorus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
†Sisyrinchium angustifolium	1 2 3 - - - - - 9 -	- - - - 5 - - - - -	- - - - - - - - - -	- - - - - - - - - -

	1—10	11—20	21—30	31—40
*Narcissus biflorus	- - - 4 - - - - 9 -	- 2 - 4 - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
‡Leucojum æstivum	- - - - - 6 - 8 - -	- 2 - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Asparagus officinalis	- - - - - 6 - - - -	- 2 - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Simethis bicolor	1 - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
‡Allium Babingtonii	- - - - - - - - 9 -	- - - - - 6 7 - - -	- - - - - - 7 - - -	- - - 4 5 - - - - -
† Scorodoprasum	1 2 3 4 5 - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
vineale	- 2 - 4 5 - 7 8 - -	1 2 3 - - - - - 9 0	1 - - - - 6 - - - -	1 - - 4 - - - (8) 9 -
† Schænoprasum	- - - - - - - - - -	- - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -
ursinum	1 2 3 4 5 6 - 8 9 -	1 2 3 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Scilla verna	- - - - - - - - - -	- - - - - - - - - 0	1 - - - - - - - - -	1 - - - - - - 8 9 0
nutans	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Colchicum autumnale	- - - - - - - - - -	1 - 3 - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Narthecium ossifragum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Juncus bufonius	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
squarrosus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 - 0	1 2 - 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Gerardi	1 2 3 4 5 6 - 8 9 -	1 2 - - 5 6 7 - - 0	1 2 - - - - 7 8 9 -	1 - - 4 5 6 7 8 9 0
† tenuis	1 2 3 - - - - - 9 -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
glaucus	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
effusus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
conglomeratus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
maritimus	1 2 3 4 5 6 - 8 9 -	1 2 - - 5 6 7 - - 0	1 2 - - - - 7 8 - -	1 - - 4 5 6 7 8 9 0
acutus	- - 3 - - 6 - - - -	- 2 - - - - - - - 0	- - - - - - - - - -	- - - - - - - - - -
supinus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
obtusiflorus	1 2 3 - - - 7 8 9 0	1 - 3 4 5 6 7 - 9 0	1 2 3 - 5 6 7 8 9 -	1 - - 4 - - - 8 - -
lamprocarpus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
acutiflorus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0

[illegible]	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Typha latifolia	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
angustifolia	– – – – – – – – – –	1 – – – – – – – – –	(1) – 3 4 – – – – – 0	– – – – 5 – 7 8 9 –
Sparganium ramosum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
simplex	1 2 3 4 5 – 7 8 9 –	1 2 3 4 5 6 7 – 9 0	1 2 3 4 5 6 7 8 – 0	1 2 3 4 5 6 7 8 9 0
affine	1 2 3 4 – 6 7 – – –	– – – – 5 6 – – – –	– 2 – 4 – 6 7 8 – –	– 2 – 4 5 – 7 8 9 0
minimum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 –	– 2 3 4 5 6 7 8 9 –	1 2 3 – 5 6 7 8 9 –
Arum maculatum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
*Acorus Calamus	– – – – – – – – – –	– – – – – – – – – –	– 2 – – – – – – – –	– (2) – – – – – 8 9 –
Lemna trisulca	– 2 – – 5 6 7 8 9 0	1 2 3 4 5 – 7 8 9 0	1 2 3 4 5 6 7 8 – 0	1 2 3 – – – 7 8 9 0
minor	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
gibba	– – – – – 6 – 8 – –	– 2 – – – – – – – –	1 2 – – – – – – – –	1 2 3 – – 6 7 8 9 0
polyrhiza	– – – – – – – 8 – –	– – 3 – – – 7 – – –	1 – 3 4 – – – – – –	1 – – – – – – – (9) –
Alisma Plantago	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
ranunculoides	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Sagittaria sagittifolia	– – – – – – – 8 – 0	1 – 3 4 5 – – 8 9 –	1 2 3 4 5 – – 8 – 0	– – 3 – – 6 7 8 9 0
Butomus umbellatus	– – – 4 5 – – 8 9 0	– (2) – – 5 – – 8 9 –	– – – – – – – – – 0	1 2 – – – 6 7 8 9 –
Triglochin palustre	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
maritimum	1 2 3 4 5 6 – 8 9 –	1 2 – – 5 6 7 – – 0	1 2 – – – – 7 8 9 –	1 – – 4 5 6 7 8 9 0
Potamogeton natans	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
polygonifolius	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
fluitans	– – – – – – – – – –	– – – – – – – – – –	– – – (4) – – – – – –	– – – – – – 7 – – –
Kirkii	– – – – – – – – – –	– – – – – 6 – – – –	– – – – – – – – – –	– – – – – – – – – –
plantagineus	– – 3 4 5 – 7 8 9 0	1 – 3 4 5 6 7 8 9 –	– 2 3 4 5 6 7 8 – –	1 – – – – – – – – –
rufescens	1 2 3 4 5 – 7 8 9 0	1 – – 4 – 6 – 8 – 0	– – 3 4 – – 7 – – 0	– 2 3 4 5 6 7 8 9 0
lanceolatus	– – – – – – – – 9 –	– – – – – – 7 – – –	– – – – – – – – – –	– – – – – – – – – –
heterophyllus	1 2 3 4 5 6 – 8 – –	1 – 3 4 5 6 7 – 9 –	1 2 3 4 5 6 7 – 9 –	– 2 3 4 5 – 7 8 9 0

	1—10	11—20	21—30	31—40
Petamogeton nitens	1 2 - - - 6 - - - -	1 - - 4 - 6 7 8 9 -	- - 3 - - - 7 8 9 -	- 2 3 4 5 - - 8 9 -
lucens	- 2 3 4 - - 7 8 9 0	- - 3 - 5 - 7 8 - 0	1 2 3 4 - 6 7 8 9 -	- 2 3 4 5 - 7 8 9 0
decipiens	- - - - - - - - - -	- - - - - - - - - -	1 2 3 - - - - - - -	- - - 4 5 - - - - -
Zizii	1 2 - - - - - 8 9 -	1 - - - - 6 7 - - -	- 2 3 - 5 6 7 8 9 -	1 - 3 4 5 - 7 8 9 0
prælongus	1 2 - - - - - 8 - -	- - - - - 6 - - - -	- 2 3 - - 6 7 - 9 -	- - - - 5 - - - 9 0
perfoliatus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - 8 9 -	1 2 3 4 5 6 7 8 9 0	- 2 3 4 5 6 7 8 9 0
crispus	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
densus	- 2 - - - 6 7 8 9 0	1 2 - 4 - - - 8 9 -	1 - - - - - - - - -	- - - - - - - - - -
obtusifolius	- 2 3 4 5 - - 8 9 -	1 - - - 5 - - - - -	- 2 3 - - - 7 - - 0	1 2 - - 5 6 7 8 9 0
Friesii	- - - - 5 - - 8 - -	- - - - 5 6 - - - -	- - 3 - - 6 - - - -	- 2 - - - - - - - -
pusillus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
pectinatus	1 2 3 - 5 6 - 8 9 0	1 2 3 4 5 6 7 8 9 0	1 - 3 - - - - - - -	- - 3 4 5 6 7 8 9 0
flabellatus	1 2 3 - 5 6 7 8 9 -	1 2 3 4 - - - 8 9 -	- - 3 4 5 - - 8 - -	1 - - 4 - - - - - -
filiformis	- - - - - - - - - -	- - - - - 6 - - - -	- - 3 4 5 6 7 - 9 -	- - 3 - 5 - 7 - - -
Ruppia spiralis	1 2 - - - - - - - -	- 2 - - - - - - - -	1 - - - - - - - - -	- - - - 5 - - 8 9 0
rostellata	1 2 3 4 5 6 - 8 9 -	- 2 - - 5 6 7 - - 0	1 - - - - - 7 8 - -	1 - - 4 5 - - 8 - 0
Zannichellia palustris (*aggr.*)	1 2 3 4 5 6 - 8 9 0	- 2 - - - - - - - 0	1 - - - 5 6 - - - -	- - - 4 5 6 - 8 9 0
brachystemon	- 2 - - - - - - 9 0	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - - 8 - -
pedunculata	1 2 - - - - - - - -	- - - - - - - - - 0	- - - - - - - - - -	- - - - - - - - - -
polycarpa	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 - -
Zostera marina	1 2 3 4 5 6 - 8 9 -	1 2 - - 5 6 7 - - 0	1 2 - - - - 7 8 - -	1 - - 4 5 6 7 8 9 0
nana	- 2 - - - - - - - -	- 2 - - - 6 - - - -	1 2 - - - - - - - -	- - - 4 5 - - - - -
Naias flexilis	1 2 - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -	- - - - - - - - - -
Eriocaulon septangulare	1 - 3 - - - - - 9 -	- - - - - 6 7 - - -	- - - - - - 7 - - -	- - - - 5 - - - - -
Eleocharis acicularis	1 2 - - - - - - 9 0	- - 4 5 - - 8 9	1 2 3 4 5 - - - - 0	1 2 3 4 - 6 7 8 9 0
palustris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0

[illegible]	- - - - - - - -	1 - 3 4 5 6 7 8 9 -	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
cæspitosus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
parvulus	- 2 - - - - - - -	- - - - - - - - - 0	- - - - - - - - - -	- - - - - - - - - -
fluitans	1 2 3 4 5 6 7 - 9 0	1 2 3 4 5 6 7 8 9 0	1 2 - 4 5 6 7 - - 0	1 2 - 4 5 - 7 8 9 0
Savii	1 2 3 4 5 6 - 8 9 -	1 2 3 - 5 6 - - - 0	1 2 - - - - 7 8 - -	1 - - 4 5 6 7 8 9 0
setaceus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 - 0	1 2 3 4 5 6 7 8 9 0	- 2 3 4 5 6 7 8 9 0
lacustris	1 2 3 4 5 - 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Tabernæmontani	1 2 3 4 5 6 - 8 9 -	1 2 - - 5 6 7 - - 0	1 2 - - - - 7 8 - -	1 - - 4 5 6 7 8 9 0
triqueter	- - - - - - - 8 9 -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
maritimus	1 2 3 4 5 6 - 8 9 -	1 2 - - 5 6 7 - - 0	1 2 - - - - 7 8 9 -	1 - - 4 5 6 7 8 9 0
sylvaticus	- - - 4 5 6 7 8 9 -	- - - 4 - - - 8 - -	- - - - - - - - - -	- 2 3 4 - 6 7 8 9 0
rufus	1 2 - - - - - - - -	- 2 - - - 6 - - - -	1 - - - - - 7 8 - -	- - - 4 5 - - 8 9 0
Eriophorum vaginatum	1 2 3 4 5 - 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
angustifolium	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
latifolium	1 2 3 - - - 7 - - -	- - - - 5 6 - - 9 (0)	- - - - - - - - - -	- - - - 5 - - - 9 -
Rhynchospora fusca	1 2 3 - - - 7 - 9 0	- - - - 5 6 7 8 - -	- - 3 4 5 6 7 8 9 -	- - 3 4 - - - - - -
alba	1 2 3 4 5 - 7 8 9 0	1 - 3 4 5 6 7 8 9 0	- 2 3 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0
Schœnus nigricans	1 2 3 4 5 - 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Cladium Mariscus	1 2 3 4 - - - - 9 -	- - 3 - 5 6 7 8 9 0	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 - 7 8 (9) -
Carex dioica	1 2 3 - - - - - 9 -	- - - - - 6 - - - 0	1 - 3 - - 6 7 8 - -	1 2 - 4 5 6 7 8 9 0
pulicaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
pauciflora	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - 9 -
divisa	- - - - - - - - - -	- 2 - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
disticha	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
arenaria	1 2 3 4 5 6 - - 9 -	- 2 - - - 6 7 - - 0	1 2 - - - - 7 8 - -	1 - - 4 5 - - 8 9 0
teretiuscula	1 2 - - - - 7 8 9 0	1 2 - 4 5 - 7 8 9 -	1 2 3 4 5 6 7 8 9 -	1 2 - 4 5 6 - 8 9 0
paradoxa	- - - - - - - - - -	- - - - - - - - - -	- - 3 - - - - - - -	- - - - - - - - - -
paniculata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0

	1—10	11—20	21—30	31—40
Carex vulpina	1 2 3 4 5 6 7 8 9 0	1 2 – 4 5 – – 8 9 0	1 2 – 4 – – 7 8 9 0	1 – 3 4 5 6 7 8 9 0
muricata	– 2 3 4 5 – 7 8 9 0	– 2 3 4 – 6 – – 9 0	(1) – – – – – – 8 – –	– – – – – – – – – 9 –
divulsa	1 2 3 4 5 6 7 8 – 0	– 2 3 4 5 – – 8 9 0	1 2 3 – – – – – – –	– – – – – – – – – – –
echinata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
remota	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
axillaris	– – – 4 – – – – – –	– – – 4 – – – – – –	1 – – – 5 – – – – –	– – – – – – – – – – –
Bœnninghausiana	– 2 – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – 5 – – – – –
elongata	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – 3 – – – – – (9) –
curta	– 2 – – – – 7 – 9 –	– – – 4 – 6 7 – – 0	1 2 – 4 5 – – – 9 0	– 2 3 4 5 6 7 8 9 0
ovalis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 4 9 0	1 2 3 4 5 6 7 8 9 0
Buxbaumii	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – –	– – – – – – – – – 9 –
Hudsonii	1 2 – 4 – 6 7 8 – 0	1 2 3 4 5 6 7 8 9 0	(1) 2 3 4 5 6 7 8 9 0	1 2 3 4 – – 7 – 9 0
acuta	– 2 – – 5 – – 8 – 0	– – – – 5 – 7 8 9 –	– 2 3 – – – – 8 – 0	– 2 3 4 – – 7 8 9 0
trinervis	– – – – – – – – – –	– – – – – 6 – – – –	– – – – – – – – – –	– – – – – – – – – –
rigida	1 2 3 – – 6 7 – – –	– 2 3 – – 6 – – – 0	– – – – – – 7 8 – –	– – – 4 5 6 – – – 0
aquatilis	1 2 – – – – – – – –	– – – – – 6 – – – –	– 2 3 – 5 – – – – 0	– – – 4 5 6 – – 9 –
vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
glauca	1 2 3 4 5 6 6 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
limosa	1 2 3 4 – – – – 9 –	– – – – 5 6 7 8 9 –	(1) 2 3 4 – 6 7 8 – –	– – 3 4 5 6 – 8 9 0
pilulifera	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 0 9 0	1 2 3 4 5 6 7 8 9 0	1 2 8 4 5 6 7 8 9 0
præcox	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 – 7 8 9 0
pallescens	1 2 3 4 5 – 7 – 9 –	1 – – 4 5 6 – 8 – 0	(1) – – 4 – 6 7 8 9 0	– 2 3 4 5 6 7 8 9 0
panicea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
pendula	1 2 3 4 5 6 7 8 9 0	1 2 – 4 5 – – 8 – 0	1 – – – – 6 – 8 9 0	1 – 3 – 5 6 7 8 9 –
strigosa	2 · (4) 5 – 7 – – –	2 – 4 – – – – – 0	1 – – – – – – 8 – –	· 3 4 5 6 7 8 9 –
sylvatica	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 – 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
punctata	1 2 3 4 5 - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Hornschuchiana	1 2 3 4 5 6 7 - 9 0	1 - 3 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0	- 2 3 4 5 - 7 8 9 0
extensa	1 2 3 4 5 6 - 8 9 -	1 2 - - 5 6 7 - - 0	1 2 - - - - 7 - - -	1 - - 4 5 - - 8 9 0
flava	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
filiformis	1 2 3 (4) - - - - 9 0	- - 3 4 5 6 7 8 9 -	- 2 3 4 5 6 7 - - -	- - 3 4 5 - - 8 (9) -
hirta	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Pseudo-cyperus	- - - 4 5 - 7 8 9 0	- - 3 4 5 6 7 8 - 0	1 2 3 4 5 - - - 9 0	- - - - - - 7 - 9 -
paludosa	- - 3 - 5 6 7 8 9 0	1 2 3 4 5 - - 8 9 0	1 2 3 4 5 - - - 9 0	1 - - - - - 7 8 - 0
riparia	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 - 7 - 9 0	1 2 - 4 - - 7 - - -	1 - - 4 5 6 - 8 9 0
ampullacea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
vesicaria	1 2 - 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	- - 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Phalaris arundinacea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Anthoxanthum odoratum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Alopecurus geniculatus	1 2 3 4 5 6 7 8 9 0	1 2 - 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
pratensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 - 4 5 6 7 8 9 0
Milium effusum	1 2 3 4 5 6 - - - -	1 - 3 - 5 6 - - - 0	- - 3 - - 6 7 8 - -	- - - - 5 6 7 8 9 0
Phleum pratense	1 2 3 4 5 - 7 8 9 0	- 2 3 - 5 - - 8 - 0	1 2 3 4 5 6 7 - 9 0	1 2 3 4 5 6 7 8 9 0
arenarium	1 2 - - 5 6 - - 9 -	- 2 - - - - - - - 0	1 2 - - - - 7 8 - -	1 - - 4 5 - - 8 9 0
Agrostis canina	1 2 3 4 5 6 7 8 9 0	1 2 3 - - 6 - 8 - 0	1 2 3 - - 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
alba	1 2 3 4 5 6 7 8 9 0	1 2 3 - 5 6 7 8 9 0	1 2 3 - - 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
vulgaris	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Calamagrostis Epigeios	- - - - - - - - - 9 -	- - - - - 6 - - - -	- - - - - - - - - -	- - - - - - - - - 0
stricta *var.* Hookeri	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - 6 7 - 9 0
Psamma arenaria	1 2 3 - 5 6 - 8 9 -	- 2 - - - 6 - - - 0	1 2 - - - - 7 8 - -	1 - - 4 5 - - 8 9 0
Aira caryophyllea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
præcox	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Deschampsia cæspitosa	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0

	1—10	11—20	21—30	31—40
Deschampsia *alpina*	1 2 - - - - - - - -	- - - - - - - - - -	- - - - - - 7 - - -	- - - - - - - - - -
flexuosa	1 2 3 - 5 6 7 8 9 0	1 2 3 4 5 6 - 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
discolor	- - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -	- - - - - - - - - -
Holcus mollis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
lanatus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Trisetum flavescens	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 - 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 - 6 7 8 9 0
Avena pubescens	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - 8 9 -	- - 3 4 5 6 7 8 9 0
Arrhenatherum avenaceum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Triodia decumbens	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Phragmites communis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Sesleria cærulea	- - - - - - - - 9 0	- - - - 5 6 7 - - -	- - 3 - - 6 7 8 9 -	- - 3 4 5 - - - - -
Cynosurus cristatus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Kœleria cristata	1 2 - - 5 - 7 8 9 0	- - - - 5 6 7 8 - 0	1 2 3 4 5 6 7 8 9 -	1 - 3 4 5 - - 8 9 0
Molinia cærulea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Catabrosa aquatica	1 2 3 4 5 6 7 - 9 0	1 2 3 4 5 - 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Melica uniflora	1 2 3 4 5 6 7 8 - -	1 2 3 4 5 6 7 8 - 0	1 2 3 4 - 6 - 8 9 0	1 2 3 4 5 6 7 8 9 0
Dactylis glomerata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 6 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Briza media	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Poa annua	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
alpina	1 - - - - - - - - -	- - - - - - - - - -	- - - - - - - 8 - -	- - - - - - - - - -
nemoralis	- 2 3 - 5 - - - 9 -	- - 3 - - - - - 9 0	1 2 3 - - - - - - -	- - - 4 - 6 7 8 9 0
† compressa	- - - (4) - - - - - -	- 2 - - - - 7 - - -	1 - - - - - 7 - - -	1 - - 4 - - 7 8 9 -
pratensis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
palustris	- - - - - - - - - -	- - - - - - - - - -	- 2 - - - - - - - -	- - - - - - - - - -
trivialis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Glyceria fluitans	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0

distans	- - 3 4 5 - - - - -	- 2 - - - - - - - 0	1 - - - - - - - - -	- - - 4 5 - 7 8 9 -
Borreri	- - - - - - - - - -	- 2 - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
Festuca rigida	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 - 0	1 2 - 4 5 - 7 8 9 -
rottbœllioides	1 2 3 4 5 6 - - 9 -	- 2 - - 5 6 7 - - 0	1 - - - - - 7 8 - -	1 - - 4 5 - - 8 9 0
uniglumis	- - - - - - - - - -	- 2 - - - - - - - 0	1 2 - - - - - - - -	1 - - - - - - - - -
Myuros	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 - 7 8 9 0	1 - 3 - - 6 - - - -	- - - - - - - - - -
sciuroides	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
ovina	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
rubra	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
sylvatica	- 2 - - 5 6 - - - -	1 2 - 4 5 - - - - 0	- - 3 - - - 7 8 - -	- - - 4 5 6 7 8 9 0
elatior	1 2 3 4 5 - 7 8 9 0	1 2 - 4 5 - 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 - 3 4 5 6 7 8 9 0
arundinacea	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 - - 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Bromus giganteus	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	- 2 3 4 5 6 7 8 9 0
asper	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - 8 9 0	1 2 3 4 5 6 7 8 9 0
erectus	- - - - - - 7 - 9 -	- 2 - 4 5 - - - - 0	1 - 3 - - - - - - -	- - - 4 - - - - - -
‡ madritensis	- - - - - 6 7 - - -	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
sterilis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 - 7 8 9 0	1 2 3 4 5 - - - - -	1 - - 4 5 6 7 8 9 0
* secalinus	- - 3 4 5 6 - - - -	- 2 - - - - - - - -	1 - - - - - - - - -	1 - - - 5 6 - 8 9 0
commutatus	- - - 4 5 6 7 8 - -	- 2 - 4 5 - 7 8 - -	- - 3 - - - 7 8 - 0	- - - 4 5 6 7 - - -
racemosus	- - - - - - - 8 9 -	- - - - - - 7 - - -	(1) - 3 - 5 - - - 9 -	1 - - - - - - 8 9 0
mollis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 - 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Brachypodium sylvaticum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
pinnatum	- - - - - 6 - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Lolium perenne	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
† temulentum	1 2 3 4 5 6 7 - 9 -	1 2 - 4 5 6 7 8 9 0	1 2 3 4 5 - - 8 - -	1 2 - 4 - 6 - 8 9 0
Agropyron caninum	- - 3 4 5 - - 8 9 -	1 - 3 - 5 - - - - 0	1 - 3 - - - - - - 0	- - 3 4 - 6 7 8 9 -
repens	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 - 5 6 - 8 9 0	1 2 3 4 5 6 7 8 9 0

	1—10	11—20	21—30	31—40
Agropyron *pungens*	- - - - 5 6 - - - -	- 2 - - 5 - - - - 0	1 - - - - - - - - -	- - - - - - - - - -
acutum	1 - 3 - 5 - - - - -	- - - - - - - - - 0	- - - - - - - - - -	1 - - 4 5 - - 8 9 -
junceum	1 2 3 - 5 6 - - 9 -	- 2 - - - 6 - - - 0	1 2 - - - - 7 8 - -	1 - - 4 5 - - 8 9 0
Lepturus filiformis	1 2 3 4 5 6 - - 9 -	1 2 - - - - - - - 0	1 2 - - - - - - - -	1 - - 4 5 - 7 8 9 0
Nardus stricta	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 - 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Hordeum secalinum	- - - 4 5 6 - 8 - -	1 2 - - - - - - - 0	1 -(3)- - - - - - -	- - - - - - 7 (8) 9 -
† murinum	- - -(4) 5 - - 8 - -	1 - - - 5 - - - 9 0	1 2 - - 5 - - - - -	1 - - - - - -(8)(9)-
Elymus arenarius	- - - - - - - - - -	- 2 - - - - - - - -	1 - - - - - - 8 - -	- - - 4 5 - - - - -
Hymenophyllum tunbridgense	1 2 3 4 5 6 7 8 9 0	1 2 - - - 6 - - - -	- - - 4 - - 7 8 9 -	1 - 3 - 5 6 7 - 9 -
unilaterale	1 2 3 - - 6 7 - 9 -	- 2 3 4 5 6 - - - 0	1 - - - - 6 7 8 9 0	1 - 3 4 5 6 - 8 9 0
Trichomanes radicans	1 2 3 4 5 6 - 8 9 0	- - - - - - - - -(0)	- - - - - - - - - -	- - 3 - 5 6 - - - -
Adiantum Capillus-Veneris	- - - - - - - - 9 -	- - - - - 6 - - - -	- - - - - - 7 8 9 -	- - - - 5 - - - - -
Pteris aquilina	1 2 3 4 5 6 7 8 9 0	1 2 3 4 9 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 2 4 5 6 7 8 9 0
Cryptogramme crispa	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	1 - 3 - 5 - - 8 9 0
Blechnum Spicant	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 - 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Asplenium lanceolatum	1 - 3 4 - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Adiantum-nigrum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
marinum	1 2 3 4 5 6 - - 9 -	1 2 - - - 6 - - - 0	1 - - - - - 7 8 9 -	- - - 4 5 - - 8 9 0
viride	1 2 3 - - 6 7 - - -	- - - - - 6 - - - -	- - - - - - 7 8 9 -	- - 3 4 5 - - - - -
Trichomanes	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Ruta-muraria	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Athyrium Filix-fœmina	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Ceterach officinarum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Scolopendrium vulgare	1 2 3 4 5 6 7 8 9 0	1 2 3 4 9 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Cystopteris fragilis	1 2 3 - - 6 7 - 9 0	- - 3 4 5 6 7 - 9 0	2 3 4 5 6 7 8 9 0	- 2 3 4 5 6 7 8 9 0
Aspidium Lonchitis	1 2 - -	- - - - 6 - - -	- - - 8 9 -	- - - 5 - - - - -

Oreopteris	1 2 3 - - 6 7 8 9 0	1 2 3 4 - 6 - 8 - 0	1 - - 4 5 - 7 - 9 0	1 - 3 4 5 6 7 8 9 0
Filix-mas	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
spinulosa	1 2 3 4 5 6 7 8 - 0	1 - 3 4 5 6 7 8 9 0	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - - - 0
dilatata	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
æmula	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 - 0	1 - 3 4 - 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Polypodium vulgare	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
Dryopteris	- - - - - - - - 9 -	- - - - - - - - - - 0	- - - - - - - - 8 9 -	- - - - - - - - - (9) -
Phegopteris	1 2 3 - - - - - 9 -	- - - 4 5 6 - - - 0	1 - - - - - 7 - 9 -	1 - 3 4 5 6 7 8 9 0
Osmunda regalis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 -	1 (2) 3 4 5 6 7 8 9 0
Ophioglossum vulgatum	1 2 3 4 5 - 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 - 5 6 - 8 9 0	1 2 - 4 5 - 7 8 9 0
Botrychium Lunaria	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 - 0	1 2 3 4 - - 7 8 - 0	1 2 - 4 5 6 7 8 9 0
Equisetum maximum	1 2 3 4 5 6 7 8 9 0	- 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 - - 9 0	1 2 3 4 5 6 7 8 9 0
arvense	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
pratense	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - 4 5 - - - 9 -
sylvaticum	1 2 3 4 5 6 7 8 9 0	- 2 3 4 5 6 7 8 - 0	1 - - 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
palustre	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
limosum	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
hyemale	- 2 - 4 - - - - - -	- 2 3 4 5 - - 8 9 0	1 - - - - - - - - -	- - 3 - 5 6 - 8 9 0
Moorei	- - - - - - - - - -	- 2 - - - - - - - 0	- - - - - - - - - -	- - - - - - - - - -
trachyodon	1 - - 4 - - - - - -	- - - - 5 - - - - -	- - - - - - 7 8 - -	- - - 4 - - - - 9 0
variegatum	- 2 - - - - - - 9 -	- - - 4 5 6 7 8 9 -	1 2 3 - - 6 - 8 9 -	- - - - - - - - - 0
Lycopodium Selago	1 2 3 4 5 6 7 - 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
inundatum	- 2 3 - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -	- - - - - - - - - -
clavatum	- 2 3 4 5 6 - - - 0	1 - 3 - - 6 - 8 - 0	1 - - 4 5 - 7 8 - 0	- - - 4 5 6 7 8 9 0
alpinum	1 2 - - - - - - - -	- - - - - 6 - - - 0	- - - - - - 7 8 - -	- - - 4 5 6 - 8 9 0
Selaginella selaginoides	- - 3 - - - - - 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 - 7 8 9 0
Isoetes lacustris	1 2 3 - - 6 - - - -	- - - - - 6 - - - 0	- - - - 5 - 7 - 9 -	- 2 - 4 5 6 7 8 9 0

	1—10	11—20	21—30	31—40
Isoetes *echinospora*	1 2 - - - - - - - - -	- - - - - 6 - - - -	- - - - - - 7 - - -	- - - - - - - - - -
Pilularia globulifera	1 - - - - - - - - -	- - - - - 6 - - - -	- - - - - - - - - -	- - - - - 6 - - 9 0
Chara fragilis	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 -
connivens	- - - - - - - - - -	- 2 - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
aspera	1 2 3 4 5 - - - 9 -	1 2 - 4 5 6 7 8 9 0	1 2 3 4 - 6 7 8 9 0	- - 3 - 5 6 7 8 9 0
desmacantha	- - - - - - 7 8 - 0	1 - - 4 5 6 7 8 9 -	1 - 3 4 5 6 7 8 9 0	- - 3 - - - - 8 - -
polyacantha	- - - - 5 - 7 8 - 0	1 - 3 4 5 6 7 8 9 0	1 2 3 - 5 6 7 8 - -	- 2 - - - - 7 - - -
contraria	1 - - - - - - - - 0	- - 3 4 5 6 7 8 9 -	1 2 3 4 5 6 7 - 9 0	- - - - 5 - 7 8 - 0
denudata	- - - - - - - - - -	- - - - - - - - - -	- - 3 - - - - - - -	- - - - - - - - - -
tomentosa	- - - - - - - - - 0	- - - - 5 - - - - -	- - 3 4 5 - - - - -	- - - - - - - - - -
hispida	1 2 - 4 5 - 7 8 9 0	1 - 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 - 0	1 - - - 5 - 7 8 - 0
vulgaris	1 2 3 4 5 - 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 - 3 - 5 - 7 8 9 0
canescens	1 - - - - - - - - -	- 2 - - - - 7 - - -	- - - - - - - - - -	- - - - - - - - - -
Tolypella glomerata	- - - - - - - 8 - 0	- 2 - - 5 - - 8 9 -	1 - 3 - - - - 8 9 -	- - 3 - - - - - - -
prolifera	- - - - - - - - - -	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
intricata	- - - - - - - - - -	- - - - - - - - - -	1 - - - - - - - - -	- - - - - - - - - -
Nitella Nordstedtiana	1 2 - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
tenuissima	- - - - - - - - - -	- - - - - - 7 - - -	- - 3 - - - - - - -	- - - - - - - - - -
gracilis	- - - - - - - - - -	- - - - - - - - - 0	- - - - - - - - - -	- - - - - - - - - -
translucens	1 2 3 4 5 - - - - -	- - - - - 6 - - - -	- - - - - - 7 - - -	- - - - - - 7 8 9 0
flexilis	1 2 3(4)(5)- - - - -	- - - - - - - - - -	- - - 4 5 6 - - 9 -	- 2 3 - - - 7 - - -
opaca	1 2 3 - 5 6 7 8 - -	- - 3 - 5 6 7 8 9 0	1 2 3 - 5 6 7 - 9 0	- 2 3 4 5 - 7 8 9 0

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IRISH TOPOGRAPHICAL BOTANY

COMPILED

LARGELY FROM ORIGINAL MATERIAL

BY

ROBERT LLOYD PRAEGER

B.A., B.E., M.R.I.A.

PRINTED AT THE

BY PONSONBY & WELDRICK.

IRISH

TOPOGRAPHICAL BOTANY

***Clematis Vitalba** L. Traveller's Joy.

Census 16—East 8, Centre 5, West 3.

1	Kerry S.	Kenmare '00—Scully.
2	Kerry N.	Killarney, naturalized, '00—Scully.
4	Cork Mid	Rochestown, Monkstown, '00—Phillips. Rare.
5	Cork E.	Dunkettle '00—Phillips. Castlemartyr; Rushbrook.
8	Limrck.	Limerick '00—P.
9	Clare	The Fountain, apparently native, '79—Corry *240*.
10	Tipp. N.	Near Dromineer '00—Phillips. Ballina '99—P.
12	Wexford	Courtown sandhills '95—P.
14	Queen's	Grantstown '98, Mountmellick—P. Bordwell—*Cyb.* I.
18	King's	Tullamore '99—P.
20	Wicklow	Delgany '93, and Enniskerry—P.
21	Dublin	North Bull '00—P. Established in the east.
22	Meath	Coonen Hill '95, Bective '96—P.
26	Mayo E.	Near Cong '96—Marshall.
31	Louth	Termonfeckin '96—P.
37	Armagh	About Armagh '92—P.

Apparently self-sown in most of the above stations. In Dublin and Kerry N. at least, it appears established. Occurs in many other divisions, merely run wild from gardens.

Thalictrum alpinum L.

Census 5—East 0, Centre 0, West 5.

1	Kerry S.	Brandon '87—A. Ley *488*.
16	Galw. W.	Muckanaght and three other stations '82—Hart *380*.

27 Mayo W. Sheffry '99—Colgan *221*. Croaghpatrick—Hart *380*.
28 Sligo Annacoona '84—Barrington & Vowell *112*.
35 Dongl. W. Slieve Snacht W. '84, Colgan—*Cyb.* II. Rare—*Fl. Don.*

Thalictrum dunense Dum.

Census 6—East 5, Centre 0, West 1.

12 Wexford Carnsore '97—Marshall. Very frequent.
20 Wicklow N. of Arklow—More '72 *614*. Rockfield—*Cyb.* I.
21 Dublin Malahide '00—P. Rare—Colgan.
35 Dongl. W. Mouth of Ray river '94—*Fl. Don.*
38 Down Ballykinler '00—Waddell. Round Dundrum Bay only.
39 Antrim Ballycastle '00, Bushfoot—Mrs. Swan. Portrush.

Thalictrum collinum Wallr.

Census 20—East 2, Centre 7, West 11.

1 Kerry S. Sugarloaf, and f. on Reeks '81—Hart *373*, *374*.
2 Kerry N. Killarney '00: rare and local—Scully.
3 Cork W. Sugarloaf mountain '54, T. Wright—Allin *Fl.*
7 Tipp. S. Muskry Lough '00—P.
9 Clare Black Hd. '99—Miss Knowles. Inishmore—Colgan *203*.
10 Tipp. N. Dromineer '00—Phillips. Frequent on Lough Derg.
15 Galw. SE. Dalystown '98—P. Castle Taylor, and f. on L. Derg.
16 Galw. W. Benwee '99—Colgan. Frequent by L. Corrib, r. elsewhere.
17 Galw. NE. Annaghdown '00, local on Lough Corrib—P.
23 Westmth. Hare Island '99—P.
24 Longfd. Elfeet Bay '00; common on Lough Ree—P.
25 Roscomn. St. John's Wood on Lough Ree '99—P.
26 Mayo E. S. of L. Mask '95—M. & S. *545*. L. Carra—Mrs. Persse!
27 Mayo W. L. Conn, c. '00—P. Mweelrea, Doo L., '82—Hart *380*.
28 Sligo Ben Bulben '92—P. Annacoona '84—B. & V. *112*.
29 Leitrim Glenade '84—B. & V. *112*.
33 Ferman. Gubbaroe '00—West & Tetley. Lower L. Erne, rare.
34 Dongl. E. Brown Hall—*Fl. Don.*
38 Down Pigeon Rock '90—S. & P. *873*. Mournes only, rare.
39 Antrim Basaltic rocks at Glenariff, D. Moore—*Cyb.* I.

Chiefly on the lake-shores and "crags" of the western limestones.

Thalictrum flavum L. Meadow Rue.

Census 23—East 10, Centre 11, West 2.

7	Tipp. S.	Clonmel '00—Phillips. F. along R. Suir—Hart *385*.
8	Limrck.	Curragh Chase '00—P.
10	Tipp. N.	Borrisokane '95—Lilly *490*. Carrigahorig; Portumna.
11	Kilkny.	Ballyragget '99—P. By Nore and Barrow occasionally.
12	Wexford	Alderton '93, Miss Glascott—B. & M. *MS*.
13	Carlow	Barrow above Borris '99, Graiguenamanagh '98—P.
14	Queen's	Rathdowney '98—P. F. by Barrow, r. in west.
15	Galw. SE.	Garryland '00—P. Frequent on Lough Derg.
16	Galw. NE.	Clonbrock '99—R. E. Dillon.
18	King's	E. of Cloughjordan '99—P. Barrow and Shannon, rare.
19	Kildare	Nurney '97—P. By Barrow occasionally—Hart, and P.
20	Wicklow	Murrough—*Guide* '78.
22	Meath	Lough Sheelin '96—P. Frequent on the Boyne.
23	Westmth.	Lough Iron '99, and common on Lough Ree—P.
24	Longfd.	Ballymahon '00, and frequent on Lough Ree—P.
25	Roscomn.	Lough Key '97; frequent—P.
31	Louth	Baltray '96—P.
32	Monaghn.	Glasslough '00—Waddell.
33	Ferman.	Killygowan I. in Upper L. Erne '81-2—Barrington *108*.
36	Tyrone	Lough Neagh '96—Miss Knowles.
37	Armagh	Portadown '92: north only, frequent—P.
39	Antrim	Crumlin '99—Miss Knowles. L. Neagh only, frequent.
40	L'derry	Near Toome, D. Moore—*Fl. NE.*

Chiefly in the Central Plain: rare or absent in the coastal hill-regions.

Anemone nemorosa L. Wood Anemone.

Divisions all, *except 22 Meath*. No doubt universal.

Ranunculus circinatus Sibth.

Census 13+(1)—East 6+(1), Centre 6, West 1.

(4	Cork Mid	Lough of Cork—Power *Fl.* '45. Not there now.)
8	Limrck.	Lough Gur '00—P. Limerick canal '99—Somerville.
9	Clare	Inchiquin Lough '92, Levinge—*Cyb.* II.
10	Tipp. N.	Borrisokane '00—Phillips. Youghal Bay '99—P.
13	Carlow	Graigue '98—P.
14	Queen's	Canal at Grattan aquaduct '98, Portarlington '96—P.

19	Kildare	Robertstown '98, Athy, Kilcock, &c.: canals only—P.
21	Dublin	Canal Clondalkin '00: local—Colgan. Occurs in Liffey.
22	Meath	Lough Crew, and canal at Ferns Lock, '97—P.
23	Westmth.	Canal near Kenny '99—P. Brittas L.—Levinge *485*.
24	Longfd.	Canal near Ballymahon '85-6—B. & V. *113*.
25	Roscomn.	Mt. Talbot, Levinge—*Cyb.* II. L. Ree '85-6—B. & V. *113*.
37	Armagh	Lough Neagh, three stations, '92—P.
38	Down	Lagan Canal at Lough Neagh '92—P. *696*.

Partial to the calm limy waters of the Central Plain canals, as will be seen from the above particulars, and may owe some of its stations to the transport of fragments by means of canal-boats.

Ranunculus fluitans Lamk.

39	Antrim	Antrim '93—P. Six-mile River only, from Dunadry to mouth, Stewart—*Fl. NE.*

Ranunculus trichophyllus Chaix.

Census 30—East 11, Centre 10, West 9.

1	Kerry S.	Derrynane '92: rare—Scully.
2	Kerry N.	Near Ballybunnion '90: rather frequent—Scully.
3	Cork W.	Skibbereen '96: frequent—Phillips.
4	Cork Mid	Lough of Cork '98: frequent—Phillips.
5	Cork E.	Youghal '96: frequent—Phillips.
6	Waterfd.	Coumshingaun '82-3—Hart *381*.
7	Tipp. S.	Tipperary '00—Phillips.
9	Clare	Inishmore '93—Colgan *203*.
10	Tipp. N.	Roscrea '00—Phillips. Lough Ourna and Portumna—P.
12	Wexford	Kilmokea, Miss Glascott—B. & G. '89 *100*.
14	Queen's	Erril '00—Phillips. Newtown and Maryborough—P.
15	Galw. SE.	St. Cleran's '99—P. Frequent, perhaps common.
16	Galw. W.	Inishbofin '75—More *616*.
17	Galw. NE.	Rinmore '00—Phillips.
18	King's	Geashill Castle and Clonad wood '96—P.
19	Kildare	Kilcullen '96—P.
21	Dublin	Howth '94: local—Colgan.
22	Meath	Kildalkey '00, Oldcastle '96—P.
23	Westmth.	Ballaghkeeran '98—P. Rare.
24	Longfd.	Granard '99, Longford '98—P.
25	Roscomn.	Mote Park '97: frequent—P.

26 Mayo E. Hollymount, More; Ballinrobe, Miss Lindsey—*Cyb.* I.
28 Sligo Lough Arrow '97—P.
32 Monaghn. Rossmore '00—Waddell.
35 Dongl. W. Doaghmore '98—Hart *405*. Fanet frequent—*Fl. Don.*
36 Tyrone Lough Neagh '96—Miss Knowles.
37 Armagh Crowhill '71, B.N.F.C.—Hb. Belfast Museum!
38 Down Clay Lake '91—P. Frequent—*Fl. NE.*
39 Antrim Rathlin Island '89—P. Frequent—*Fl. NE.*
40 L'derry Magilligan, Corry—*Fl. NE.*

The distribution of none of the Batrachian *Ranunculi* is as yet fully known. The present species probably occurs in all divisions.

Ranunculus Drouetii Godr.

Census 12—East 5, Centre 3, West 4.

2 Kerry N. Killarney '00: rare—Scully.
5 Cork E. Whitegate '97 (var. *Godronii*)—Phillips.
12 Wexford Wexford, Rosslare, Churchtown, '97—Marshall *539*.
16 Galw. W. About Cong, '95—M. & S. *545*.
18 King's Tullamore River below Geashill '96—P.
19 Kildare Nurney and (var. *Godronii*) S. of Kildare '97—P.
21 Dublin Near Foxrock, Vowell—Corry '82 *245*.
23 Westmth. Knock Drin (type and *Godronii*)—Levinge '94 *484*.
26 Mayo E. About Cong '95—M. & S. *545*.
27 Mayo W. Castlebar and Westport '99—Marshall.
31 Louth South of Soldier's Point '96—P.
35 Dongl. W. Near Ardara—*Fl. Don.*

Ranunculus heterophyllus Fries.

Census 20—East 8, Centre 7, West 5.

5 Cork E. Midleton '00: frequent—Phillips.
6 Waterfd. Stradbally '99—P. Coumshingaun '82–3—Hart *381*.
9 Clare Inishmore '95—P. Ennis—Corry *240*. Inishmaan.
10 Tipp. N. Lough Ourna '99—P.
12 Wexford Gorey and Wexford districts f. '97—Marshall *539*.
14 Queen's River Erkina above Durrow '98—P.
15 Galw. SE. Portumna '00—Phillips.
16 Galw. W. Near Clonbur '95—M. & S. *545*.
21 Dublin Lusk '00: local—Colgan.

22	Meath	Kildalkey '00—P.
23	Westmth.	River Inny below Lough Kinale '85—P. *692*.
24	Longfd.	Below Drumsna '00—P. Lough Ree—B. & V. *113*.
25	Roscomn.	Near Athlone '67—Stewart.
26	Mayo E.	Cong neighbourhood '96—Marshall.
33	Ferman.	Devenish Island '81-2—Barrington *108*.
34	Dongl. E.	Throughout, frequent—*Fl. Don.*
35	Dongl. W.	Throughout, frequent—*Fl. Don.*
37	Armagh	L. Neagh and Camlough River '92—P.
38	Down	Helen's Tower '91—P. Frequent—*Fl. NE.*
39	Antrim	Shaw's Br., Crumlin, Corry; Belfast, Stewart—*Fl. NE.*

The remarks under *R. trichophyllus* probably apply also to the present species, though it appears less frequent, and is very rare in the south.

Ranunculus peltatus Fries.

Census 22—East 11, Centre 7, West 4.

1	Kerry S.	Churchtown '00: frequent—Scully.
2	Kerry N.	Listowel '99: frequent—Scully.
4	Cork Mid	Ballyfeard '00 (Scully): rare—Phillips.
5	Cork E.	Doneraile—Allin *Fl.* '83.
7	Tipp. S.	Suir below Templemore (*floribundus*) '82—Hart *385*.
10	Tipp. N.	Shannon above Portumna '98—P.
12	Wexford	Gorey '97—Marshall. C. in N. Wexford—B. & M. *103*.
13	Carlow	R. Slaney, c. (*floribundus*) '81—Hart *371*.
20	Wicklow	R. Slaney, c. (*floribundus*) '81—Hart *371*.
21	Dublin	Portmarnock '94: local (*truncatus*)—Colgan.
22	Meath	Boyne below Navan (*floribundus*), D. Moore—*Cyb.* I.
23	Westmth.	River Inny below Lough Kinale '85—P. *692*.
24	Longfd.	Chapel Island in Lough Ree '97—P.
26	Mayo E.	East of Foxford (*truncatus*) '00—P.
27	Mayo W.	Near Foxford (*floribundus*) and L. Cullin, More—*Cyb.* I.
32	Monaghn.	Castleblayney (*elongatus* F. Schultz) '00—Somerville. Creeve L. (*truncatus*) '00—P.
34	Dongl. E.	Finn River (*truncatus*) and other stations—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Frequent throughout '92—P.
38	Down	Money Lake '91—P. Common—*Fl. NE.*
39	Antrim	Lough Mourne, Stewart: frequent—*Fl. NE.*
40	L'derry	Lough Beg, Corry; R. Bann, Stewart—*Fl. NE.*

Ranunculus penicillatus Dum.

Census 32—East 14, Centre 10, West 8.

1	Kerry S.	Castlegregory '94—Scully.
2	Kerry N.	Near Listowel '90: rather rare—Scully.
3	Cork W.	Skibbereen '96: common—Phillips.
4	Cork Mid	Donoughmore '96: common—Phillips.
5	Cork E.	Midleton '00: common—Phillips.
6	Waterfd.	Sheskin '00—Phillips. Frequent—P.
7	Tipp. S.	Fethard '00—Phillips. Very frequent.
8	Limrck.	Doon '00—P. Corbally '97, G. Fogerty—Hb. L.F.C.!
9	Clare	Ennis '85–6—Stewart *863*.
10	Tipp. N.	Roscrea and Templemore '00—Phillips. Nenagh—P.
11	Kilkny.	Kilkenny '97, Ballyragget '99—P.
12	Wexford	Gorey '97—Marshall *539*. R. Boro—B. & M. *102*.
13	Carlow	Aghade and frequent in R. Barrow '99—P.
14	Queen's	Rathdowney '00—Phillips.
15	Galw. SE.	St. Cleran's, '99—Mrs. Joyce! Gort, R. Suck—Phillips.
17	Galw. NE.	Athenry, Galway, '00—Phillips. Abbeyknockmoy—P.
19	Kildare	Ballymore '00, Athy '99—P.
20	Wicklow	Shillelagh '99—P.
21	Dublin	Near Brittas '94: local—Colgan.
22	Meath	Navan '96—P.
23	Westmth.	Lough Iron '99—P. Lough Owel—Levinge *484*.
24	Longfd.	R. Inny near Lough Ree '85–6—B. & V. *113*.
25	Roscomn.	Lough Ree '85-6—B. & V. *113*.
28	Sligo	Ballysadare '00—P. Sligo '84—B. & V. *112*.
31	Louth	Common in R. Glyde '90—Butler *185*.
32	Monaghn.	Monaghan '00—Waddell.
33	Ferman.	Ballycassidy R. '92—P. *691*. Belleek—Barrington *108*.
34	Dongl. E.	River Erne '93, and River Eske—*Fl. Don.*
36	Tyrone	Strabane '75—Stewart.
37	Armagh	Maghery, Loughgall, Forkill, '92—P.
39	Antrim	Ballymena '91—P. Frequent—*Fl. NE.*
40	L'derry	River Bann at Coleraine, Hyndman—*Fl. NE.*

Probably occurs in all the divisions. Messrs. Groves write of specimens (from divisions 6, 7, 10, 11, 13, 17, 19, 20, 23), sent in 1900:—"*R. pseudo-fluitans* of Baker and Foggitt, quite a distinct plant from what we take to be Hiern's form *pseudo-fluitans*."

Ranunculus Baudotii Godr.

Census 15—East 7, Centre 0, West 8.

1	Kerry S.	Castlegregory '94—Scully. Local.
2	Kerry N.	Ballybunnion '90: frequent—Scully.
3	Cork W.	Schull '96: frequent—Phillips.
4	Cork Mid	Rochestown '98: frequent—Phillips.
5	Cork E.	Ballyvodock '00: frequent—Phillips.
6	Waterfd.	Tramore '99—P. Near Waterford, Babington—*Cyb.* I.
9	Clare	Inchiquin L. '93, Levinge—W.B.E.C. '93–4. Local, f.
12	Wexford	Wexford '96—Marshall *537*. Lady's I. Lake—Hart *384*.
16	Galw. W.	Inishbofin '75—More *616*. Galway, Melville—*Cyb.* I.
17	Galw. NE.	Rinmore '00—Phillips.
21	Dublin	Portmarnock '00—P. Rare—Colgan.
31	Louth	South of Soldier's Point '96—P.
34	Dongl. E.	Fahan and Ballyshannon—*Fl. Don.*
35	Dongl. W.	Tory Island '77—Barrington *106*. Fanet—*Fl. Don.*
37	Armagh	Tartaraghan glebe (*confusus*) '95, Lett—W.B.E.C. '95–6.

Near the sea, chiefly on the south and west coasts. The var. *confusus* inland in Armagh.

Ranunculus tripartitus DC.

3	Cork W.	Baltimore '96, and (var. *intermedius*) Adrigole '94—Phillips.

The second British station for the type.

Ranunculus Lenormandi F. Schultz.

Census 12—East 8, Centre 1, West 3.

1	Kerry S.	Kenmare '99: frequent—Scully.
2	Kerry N.	Listowel '99: chiefly in the south—Scully.
3	Cork W.	Inchigeela '00: frequent—Phillips.
4	Cork Mid	Ballinhassig '98: common in south—Phillips.
5	Cork E.	Whitegate '98: frequent—Phillips.
6	Waterfd.	Cappoquin, Ballyscanlan, '99—P. Portlaw—Flemyng!
7	Tipp. S.	Muskry L. and near Cahir '00—P. Galtymore—*Cyb.* I.
11	Kilkny.	Brandon Hill '98—P.
12	Wexford	Wexford '96—Marshall. Frequent—B. & M. *103*.

13	Carlow	Blackstairs '99, Mt. Leinster, Polmounty R.—P.
20	Wicklow	Avondale '99—P. Common.
21	Dublin	Two Rock Mountain '99—Colgan. Southern mountains.

South and south-east only, from Kerry to Dublin. The Achill plant (Praeger *779*, and *Cyb.* II.) is a peculiar form of *R. hederaceus*.

Ranunculus hederaceus L.

Divisions all. Distinctly calcifuge, and rare in the Central Plain, most of the records being from patches of non-calcareous rocks. Common off the limestone.

Ranunculus sceleratus L.

Census 34—East 15, Centre 9, West 10.

1	Kerry S.	Inch '94 : rare—Scully.
2	Kerry N.	Near Ballybunnion '90 : rather frequent—Scully.
3	Cork W.	Baltimore '96 : frequent in south—Phillips.
4	Cork Mid	Carrigaline '00 (Scully): common near coast—Phillips.
5	Cork E.	Queenstown junction '00 : common near sea—Phillips.
6	Waterfd.	Clonea and Tramore '99—P.
8	Limrck.	Lough Gur '00—P. Frequent by the Shannon.
9	Clare	Clare Castle and Lough Senan '85–6—Stewart *863*.
10	Tipp. N.	Friar's Lough '97—P.
11	Kilkny.	Lough Cullin '99, and f. by tidal waters—P.
12	Wexford	Wexford '97—Marshall. Not rare.
13	Carlow	Near Ballymartin '97—T. Hartley!
14	Queen's	Rathdowney '98—P. Ballybrittas '84—Hart *383*.
16	Galw. W.	Inveran '95—Colgan.
17	Galw. NE.	Rinmore '00—Phillips. Terryland River '99—P.
18	King's	Geashill '96—P.
19	Kildare	Rathangan '98, Athy '99—P.
20	Wicklow	Killoughter '97—P. Frequent on coast.
21	Dublin	Near Lusk '00 : frequent—Colgan.
22	Meath	Navan '96 : frequent throughout—P.
23	Westmth.	Lough Iron '99—P. Rare.
24	Longfd.	Shannon below Roosky '00—P.
25	Roscomn.	Athlone '98—P.
27	Mayo W.	Killala '00—P. Newport '99—Marshall.
28	Sligo	Ballysadare and Mullaghmore '97—P.

31	Louth	Killencoole '96; frequent throughout—P.
32	Monaghn.	Monaghan, Clones, '00—Somerville. Rockcorry.
34	Dongl. E.	Trawbreaga Bay '98—Hart *405*. Throughout—*Fl. Don.*
35	Dongl. W.	Fanet &c.: north only—*Fl. Don.*
36	Tyrone	Lough Neagh '96; rare—Miss Knowles.
37	Armagh	Frequent throughout '92—P.
38	Down	Dundrum '00—P. Common—*Fl. NE.*
39	Antrim	Portglenone '00—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Bellarena '98: common in the north—Mrs. Leebody.

Though occurring chiefly by the coast, this plant is widely distributed in the interior. Probably it occurs in all the divisions.

Ranunculus Flammula L. Lesser Spearwort.

Divisions all. Common throughout the country.

Ranunculus scoticus Marshall. (*R. petiolaris* Marshall.)

27	Mayo W.	Sraheens Lough at Achill Sound '99—Marshall.
(29	Leitrim ?	L. Bofin '71, Dyer in Hb. Brit. Mus.—Marshall *534*.)

Ranunculus Lingua L. Great Spearwort.

Census 28+(2)—East 13, Centre 10, West 5+(2).

1	Kerry S.	Near Stradbally '83—Hart *381*.
4	Cork Mid	Blarney '55—Woods *917*.
6	Waterfd.	Clonea '82—Hart *384*. Blenheim, c.—B. & G. *100*.
7	Tipp. S.	Thurles '98—P. Holycross '82—Hart *385*.
9	Clare	Doonbeg '99—Miss Knowles. Ennis—Mackay *522*.
10	Tipp. N.	NW. of Nenagh '99, Portumna '97—P.
11	Kilkny.	Foulkscourt bog, S. Madden—*Cyb.* I.
12	Wexford	Ballycarney—G. E. J. Greene '95. In the south, rare.
14	Queen's	Durrow '84—Hart *388*.
15	Galw. SE.	Kilcolgan River '99—Colgan. Kilmacduagh; L. Derg f.
16	Galw. W.	Maam '35—Babington *51*. Letterfrack—More *614*.
17	Galw. NE.	Tuam district frequent '99, and by R. Suck—P.
19	Kildare	Rathangan '98, Monasterevan, Kilcock: canals only—P.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.
21	Dublin	Royal Canal at Lucan '00; rare—Colgan.
22	Meath	Bective '00: frequent throughout—P.
23	Westmth.	Lough Iron '99—P. Frequent in centre and west.

24 Longfd. Ballymahon and Saint's Island '00—P.
25 Roscomn. Rockville '99: common throughout—P.
26 Mayo E. Ballinrobe '97—W. de V. Kane. Cong—M. & S. *545*.
30 Cavan Farnham and Mount Nugent '96—P.
31 Louth Braganstown '00—P. Frequent in centre.
32 Monaghn. Abounds . . . near Drum, J. Bain—More '72 *614*.
33 Ferman. Enniskillen '00—P. Rare.
(34 Dongl. E.? Ballyshannon, H. Allingham: not seen—*Fl. Don.*)
(35 Dongl. W.? Lough Eske—*Fl. Hib.* '36: not seen—*Fl. Don.*)
37 Armagh Loughgall, and along Lough Neagh, '92—P.
38 Down Ballydugan Lough '88—P. Rare—*Fl. NE.*
39 Antrim Portmore '86—P. In Bann basin only.
40 L'derry Kilrea '95—P. Bann basin only?

Ranunculus Auricomus L. Goldilocks.

Census 23—East 12, Centre 6, West 5.

4 Cork Mid Blarney—Power *Fl.* '45. Leemount—Drummond *287*.
5 Cork E. Carrickabrick and Rockville, Chandlee—Allin *Fl.* '83.
7 Tipp. S. Fethard '97—P.
11 Kilkny. Kilkenny and Callan '00—Mrs. Persse.
15 Galw. SE. Lavally '99—Mrs. Joyce! Lough Cooter '00—P.
17 Galw. NE. East of Tuam '99—Colgan.
18 King's Barrow Bank House '84—Hart *383*.
19 Kildare Near Castletown '00—P.
20 Wicklow Avondale '99—P. Frequent.
21 Dublin Churchtown '00: frequent—Colgan.
22 Meath Athboy '00—P.
23 Westmth. Belvedere—Levinge '94 *484*.
26 Mayo E. Ballinrobe '93—Mrs. Persse!
27 Mayo W. Westport demesne, J. Reilly—Barrington '77 *105*.
29 Leitrim Near Annaghearly Lough '99—P.
30 Cavan Cavan '96—P.
31 Louth Piperstown '99—Miss R. Smith!
33 Ferman. Common about Enniskillen '00—West.
35 Dongl. W. Near Ramelton, Misses Kinahan—*Fl. Don.*
37 Armagh Frequent throughout '92—P.
38 Down Knocknagoney '00—P. Rare—*Fl. NE.*
39 Antrim Ballymena '99—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Bellarena '94—Mrs. Leebody. Loughinshollen—*Fl. NE.*

Ranunculus acris L. Meadow Crowfoot.

Divisions all. Very common.

Ranunculus repens L. Sitfast.

Divisions all. Very common.

Ranunculus bulbosus L.

Divisions all. Less common than the two preceding, except in light soils.

†Ranunculus parviflorus L.

Census 6—East 4, Centre 1, West 1.

4	Cork Mid	Robert's Head '99—Scully *835*. Carrigrohane—*287*.
5	Cork E.	Brick I. '00, Whitegate—Phillips. Eastferry—Allin *Fl.*
7	Tipp. S.	Cashel and Fethard '00—Phillips.
11	Kilkny.	New Ross '00—Phillips. Kilkenny, Madden—*Cyb.* I.
12	Wexford	Native at Rosslare ['97]—Marshall *537*. V. f. in south.
21	Dublin	Bray Common '75, Barrington—*Cyb.* II.

Perhaps native, certainly naturalized, in the SE. A casual at Belfast.

Ranunculus Ficaria L. Lesser Celandine.

Divisions all. Common.

Caltha palustris L. Marsh Marigold.

Divisions all. Common.

Caltha radicans Forster.

33	Ferman.	Devenish Island '81–2—Barrington *108*.

Trollius europæus, L. Globe-flower.

Census 3—East 0, Centre 1, West 2.

33	Ferman.	Common on Bilberry Island in L. Melvin '00—P.
34	Dongl. E.	Deel R., Finn R., and Reelan Water—*Fl. Don.*
35	Dongl. W.	Loughs Fern, Gartan, Akibbon: Lennan river basin only—*Fl. Don.*

North-west only, rare and local.

Aquilegia vulgaris L. Columbine.

Census 31—East 14, Centre 9, West 8.

1	Kerry S.	‡Blackwater bridge '89—Scully.
2	Kerry N.	‡Killarney '96 : rare—Scully.
3	Cork W.	*Near Macroom '00, Skibbereen '96 —Phillips.
4	Cork Mid	†Belgooly '00 (Scully) : rare—Phillips.
5	Cork E.	†Little Island '00 : rare—Phillips.
6	Waterfd.	Frequent at Blenheim, Miss Glascott—B. & G. '89 *100*.
7	Tipp. S.	‡Ballinure '98—P.
8	Limrck.	‡Curragh Chase '00—P.
9	Clare	Dromoland '98—W. de V. Kane. Frequent in the north.
10	Tipp. N.	Bog at Carrigahorig, rocks Dromineer, '00—Phillips.
11	Kilkny.	By R. Nore at Kilkenny '97—P. Rare.
12	Wexford	Owenduff R. apparently native—B. & M. '92 *102*.
14	Queen's	Mountmellick '00—Phillips. Looking wild, rare—P.
15	Galw. SE.	Moyode '99 ; f. in Woodford district '98—P. Local.
16	Galw. W.	Thonabracky Mt. '91, Allman—*Cyb.* II. Galway—P.
17	Galw. NE.	Menlo looking native '99—P. F. along Lough Corrib.
18	Kings	Clonad wood looking native '96—P. Frequent.
19	Kildare	Dollardstown bog c. '89, Scully—*Cyb.* II. Frequent—P.
20	Wicklow	Devil's Glen '00—C. Waterfall. *Avondale '99—P.
21	Dublin	‡Leixlip '94 : rare—Colgan.
22	Meath	Beauparc on limestone rocks '95—P.
23	Westmth.	L. Deravaragh '95—Levinge *486*. Centre and west.
25	Roscomn.	Mount Talbot '97—P.
26	Mayo E.	Ballinrobe '90—Mrs. Persse ! L. Corrib—*Cyb.* I.
31	Louth	High up on Carlingford Mountain '00—P.
33	Ferman.	Drumskew '00, Dunbar '99—Tetley.
34	Dongl. E.	Brown Hall native, †near Moville—*Fl. Don.*
37	Armagh	Near Armagh '80—W. F. Johnson ! Ardmore—Lett.
38	Down	Established at Newcastle '89—S. & P. *873*.
39	Antrim	*Shane's Castle, &c., Stewart—*Fl. NE.*
40	L'derry	L. Neagh near Salterstown, *Flor. Hib.* *—*Fl. NE.*

It is difficult to determine the status of the Columbine, but on the western limestone tracts especially (as in 9, 15, and 17), in some central divisions (10, 14, 18, 19, and 23) and in the east (in 12 and 31) it has claims for ranking as native. Much rarer and perhaps only as an escape in Ulster.

Nuphar luteum Smith. Yellow Water-lily.

Divisions all, *except 12 Wexford.* Generally frequent.

Nymphæa alba L. White Water-lily.

Divisions all, *except 14 Queen's Co.*; but the records for ‡12 Wexford, *13 Carlow, ‡20 Wicklow, and *21 Dublin, are unsatisfactory, being qualified as shown. Elsewhere it is native, and increases westward.

***Papaver somniferum** L. Opium Poppy.

Census 13—East 6, Centre 3, West 4.

1	Kerry S.	Ballinskelligs '00: rare and uncertain—Scully.
2	Kerry N.	Ardfert '99: rare—Scully.
3	Cork W.	Baltimore '96, Kilkern '91—Phillips.
4	Cork Mid	By R. Lee—Power *Fl.* '45. Carrigrohane—*287*.
5	Cork E.	Midleton '00: frequent as an escape—Phillips.
7	Tipp. S.	Fethard '97—P.
8	Limerick	"Grows freely" at Castleconnell '00—R. D. O'Brien.
21	Dublin	Howth '00: rare—Colgan.
22	Meath	Mornington, well established, '96—P.
26	Mayo E.	Foxford, naturalized, '00—P.
31	Louth	Sands north of Boyne mouth, established, '96—P.
34	Dongl. E.	Buncrana and Bundoran, established—*Fl. Don.*
38	Down	Near Rostrevor ['90]—S. & P. *873*.

Established in at least some of the above localities. Occurs in many other stations as a casual escape.

Papaver Rhœas, L. Corn Poppy.

Census 34+(3)—East 15, Centre 11, West 8+(3).

(1	Kerry S.	*Railway near Camp '94, casual—Scully.)
(2	Kerry N.	*Killarney '94, casual—Scully.)
3	Cork W.	Baltimore '96: rare—Phillips.
4	Cork Mid	Donoughmore '94: frequent in south—Phillips.
5	Cork E.	Midleton '00: frequent—Phillips.
6	Waterfd.	Ballyscanlan '99—P. Throughout, local.
7	Tipp. S.	Cahir '00, Ballinure, Fethard—P.

8	Limrck.	Curragh Chase '00—P. Askeaton—Hb. L.F.C.!
9	Clare	Lisdoonvarna '00—Miss Knowles. F. in N. half.
10	Tipp. N.	Rapla '99—P. Common.
11	Kilkny.	Kilkenny '98: frequent—P.
12	Wexford	‡Enniscorthy '98—P.
13	Carlow	Bagenalstown '99: locally common—P.
14	Queen's	Rathdowney '00—Phillips. Maryboro', Dunmore—P.
15	Galw. SE.	North of Gort '00—P. Frequent in SE. and SW.
16	Galw. W.	‡Kilbeg ferry '99—P.
17	Galw. NE.	Oranmore '99, Clonbrock '96—P.
18	King's	Tullamore '99: common—P.
19	Kildare	Kildare '96: frequent throughout—P.
20	Wicklow	Bray and Greystones '94—P. Very local?.
21	Dublin	Howth '00: common—Colgan.
22	Meath	Beauparc '00: common—P.
23	Westmth.	Mullingar '97—Carr. Frequent in the west—P.
24	Longfd.	Ballymahon and Newtowncashel only, common—P.
25	Roscomn.	Athlone and Ballinasloe '99—P.
26	Mayo E.	Ballinrobe '90—Mrs. Persse!
27	Mayo W.	Mallaranny, garden weed, '99—Marshall.
28	Sligo	Railway at Collooney '96—Colgan.
29	Leitrim	‡Tullaghan '99—P.
31	Louth	Dundalk '00: frequent along whole coast—P.
32	Monaghn.	Glasslough '00—P.
(35	Dongl. W.	Rathmullan, casual—*Fl. Don.*)
36	Tyrone	Strabane '96: rare—Miss Knowles.
37	Armagh	Common near Armagh: casual elsewhere, '92—P.
38	Down	Killough '98—P. Rare and local.
39	Antrim	Lisburn established '98—P. Casual elsewhere.
40	L'derry	Magilligan '94—P.

Abundant in parts of the centre and east; the Field Poppy thins out westward and northward, and is practically absent from the extreme south-west and north-west. It is distinctly calcicole, and is rare in those divisions where limestone does not predominate.

Papaver dubium L.

Divisions all, *except 28 Sligo, 29 Leitrim, 33 Fermanagh.* Commoner than *P. Rhœas*, with a similar distribution, being rarest in the north-west. Not so distinctly calcicole as the last.

†Papaver Argemone L.

Census 24—East 15, Centre 5, West 4.

3	Cork W.	The Island at Clonakilty '91—Phillips.
4	Cork Mid	Crosshaven '98 : rare—Phillips. Kilcrea—Allin *Fl.*
5	Cork E.	Midleton, Little Island '00—Phillips.
6	Waterfd.	Ardmore, Miss Grubb—*Cyb.* I.
7	Tipp. S.	Vale of Aherlow '00—P.
9	Clare	Kilfenora '00—Miss Knowles. Corrofin—*Cyb.* II.
11	Kilkny.	Fiddown bridge '00—P.
12	Wexford	Rosslare '97—Marshall *539*. South only, rare.
13	Carlow	Borris '98—P.
14	Queen's	Maryborough '96—P.
17	Galw. NE.	Ahascragh '96—P.
19	Kildare	Near Athy, Carroll—*Cyb.* I.
20	Wicklow	Wicklow '00—C. Waterfall. F. on N. half of coast.
21	Dublin	Rogerstown '00 : rare—Colgan.
22	Meath	Oldcastle, Kilmessan, Mornington, '96—P.
23	Westmth.	Athlone '99—P. Lough Ree (B. & V.)—Levinge *484*.
24	Longfd.	Ballymahon '00—P.
25	Roscomn.	Athlone frequent '99—P. Kiltoom—B. & V. *113*.
27	Mayo W.	Mallaranny, garden weed, '99—Marshall.
31	Louth	Greenore '00—P. Frequent round Dundrum Bay.
37	Armagh	Lurgan and Armagh '92—P.
38	Down	Dundonald, Stewart : north only, rare—*Fl. NE.*
39	Antrim	Curran '89—P. South only, very rare—*Fl. NE.*
40	L'derry	Magilligan '97—Mrs. Leebody. Very rare—*Fl. NE.*

Chiefly in the east, in gravel-pits and sandy fields, and by roadsides. Nowhere abundant.

†Papaver hybridum L.

Census 10+(1)—East 6+(1), Centre 2, West 2.

(4	Cork Mid ?	Blackrock, Power—Allin *Fl.* '83. ?—Phillips.)
5	Cork E.	Little Island '00—Phillips.
8	Limrck.	Askeaton '00—P.
9	Clare	Muckinish '95—Colgan. Frequent in N. half.
12	Wexford	Wexford '96—Marshall.

15 Galw. SE. Chevy Chase '00—P. Frequent in the west.
20 Wicklow Greystones '93—P. By coast in the north, rare.
21 Dublin Portrane '00 : rare—Colgan.
24 Longfd. Elfeet Bay on L. Ree '85–6—B. & V. *113*.
31 Louth Greenore '93—P.
38 Down Killough '98—Davies *265*. Holywood, Groomsport—*Fl. NE.*

The remarks under the last species apply equally to this.

Meconopsis cambrica Vig. Welsh Poppy.

Census 11—East 5, Centre 3, West 3.

6 Waterfd. Coumshingaun L. '93—Flemyng. Poulnagolm—*Cyb.* I.
8 Limrck. Glancushnabinnian in the Galtees '80—Hart *372*.
9 Clare Sixmilebridge, C. B. Barrington—Hart '81 *369*.
14 Queen's] Glendine Gap '97—P. By the Barrow, D. Moore—*Cyb.* I.
16 Galw. W. Muckanaght '82—Hart *380*.
20 Wicklow Devil's Glen '00—C. Waterfall. Dargle Glencree.
28 Sligo Ben Bulben and King's Mountain '84—B. & V. *112*.
36 Tyrone Ballyskeagh Hill '69—Sigerson *838*.
38 Down Above Rostrevor '97—P.
39 Antrim Grey Man's Path '00—Mrs. Swan. Garron Point.
40 L'derry Magilligan Braes, Brenan—S. & P. '95 *874*.

Glaucium flavum Crantz. Horned Poppy.

Census 16—East 9, Centre 0, West 7.

1 Kerry S. Near Rossbehy '92—Scully.
2 Kerry N. Near Tralee '94 : rare and local—Scully.
3 Cork W. Near Mizen Head '96 : frequent in south—Phillips.
4 Cork Mid Currabinny '00 (Scully)—Phillips. Ringaskiddy.
5 Cork E. Ballyvodock '00 : frequent—Phillips.
6 Waterfd. Dungarvan '99—P. Not rare on the coast.
9 Clare Scattery I. '00—O'Brien! Shannon and Inishmaan only.
12 Wexford Courtown '94—Mrs. Tatlow! Frequent—Hart *384*.
15 Galw. SE. Tawin '99—Mrs. Joyce. Rinville, Carrowmore, '99—P.
16 Galw. W. Salthill '00—Phillips. Barna Head '99—P.
17 Galw. NE. Ballyloughaun abundant '99—P.

20	Wicklow	Newcastle '00—C. Waterfall. Coast f., especially in N.
21	Dublin	Sutton '00: rare—Colgan.
22	Meath	Gormanstown '95—P. Mayden Tower—*Ir. Fl.*
31	Louth	Greenore '00, and f. round Dundalk Bay—P.
38	Down	Glassdrumman '97—P. S. half of coast, local.

Along the east coast from Cork to above Strangford Lough. On the west coast extremely local: the Galway stations all lie within a three-mile radius. Absent from the north, including Donegal (Hart *406*).

***Chelidonium majus** L. Celandine.

Census 32—East 14, Centre 11, West 7.

Divisions all, *except 12 Wexford, 16 Galway W., 17 Galway NE., 27 Mayo W., 28 Sligo, 29 Leitrim, 30 Cavan, 32 Monaghan.* Usually not far from houses.

***Corydalis lutea** DC. Yellow Fumitory.

15	Galw. SE.	Roxborough, Hart—*Cyb.* II.
20	Wicklow	Ballyarthur '94 many years established, Bayly—*Cyb.* II
35	Dongl. W.	Fanet and Letterkenny established—*Fl. Don.*
38	Down	Hillsborough established '92—P.
39	Antrim	Crumlin "quite naturalized" '64—B.N.F.C. *117*.

Garden origin in all cases; but appears established in the above selected stations.

Corydalis claviculata DC. Climbing Fumitory.

Census 5—East 4, Centre 0, West 1.

6	Waterfd.	Carrickbeg '00—Grubb *357*, and P. Along Blackwater.
11	Kilkny.	White Horse Rock on R. Barrow '99—P.
20	Wicklow	Luggela '94—P. Chiefly in NW., frequent there.
21	Dublin	Carrickmines '00—Colgan. South only, rare.
34	Dongl. E.	Culmore abundant '74—W. E. Hart *408*.

Old records from 4, 16, 17, 29, and 38 need confirmation. South-east, with an outlying station in Donegal. Calcifuge.

Fumaria pallidiflora Jord. Fumitory (genus).

Census 24—East 10, Centre 4, West 10.

1	Kerry S.	Kell's Bay '92 : rare—Scully.
2	Kerry N.	Abbeydorney '99 : rather frequent—Scully.
3	Cork W.	Skibbereen '96 : frequent—Phillips.
4	Cork Mid	Donoughmore '94 : common—Phillips.
5	Cork E.	Youghal '00 : common—Phillips.
6	Waterfd.	Dungarvan '99—P. Carrickbeg '00—Phillips.
7	Tipp. S.	SE. of Slievenaman '00—P.
9	Clare	Ballyvaughan '95—Colgan. Frequent in N. half.
10	Tipp. N.	Roscrea '00—Phillips.
12	Wexford	Near Wexford '97—Marshall *539*.
14	Queen's	Maryborough '93—P. *712*.
15	Galw. SE.	Loughrea '00—Phillips. Portumna; Castle Taylor.
16	Galw. W.	‡Inishbofin '75—More *616*.
17	Galw. NE.	Oranmore '99—P.
20	Wicklow	Shillelagh '99—P. Greystones; Fassaroe.
21	Dublin	Kilgobbin '00 : frequent—Colgan.
28	Sligo	Strandhill '97—P.
34	Dongl. E.	Malin Head '93—P. *721*. ‡F. throughout—*Fl. Don.*
35	Dongl. W.	‡Frequent throughout—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Armagh, &c. : rare, '92—P.
38	Down	Saul '90—P. Common—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Common—*Fl. NE.*
40	L'derry	Toome, Stewart—*Fl. NE.* Frequent?—S. & P. *874*.

No doubt more wide-spread than would appear from the above records. The distribution of none of the Fumitories is yet worked out.

Fumaria Boræi Jord.

Census 14—East 7, Centre 4, West 3.

2	Kerry N.	Near Killarney railway station '90—Druce.
10	Tipp. N.	Cloughjordan '00—P.
12	Wexford	Near Carnew '00—Marshall. SE., c.—Marshall *539*.
13	Carlow	Goresbridge '99, St. Mullin's '98—P.
17	Galw. NE.	By R. Suck at Bellagill bridge '96—P.
18	King's	Clara '99—P.
20	Wicklow	Carnew '00—Marshall. Shillelagh '99—P.
21	Dublin	Rathfarnham '94—P.

24	Longfd.	Ballymahon '00—P.
25	Roscomn.	Athlone '98, and by R. Suck at Bellagill bridge '96—P.
28	Sligo	Strandhill '97—P.
31	Louth	Dunleer '00—P.
38	Down	Giant's Ring, Stewart—*Fl. NE.*
39	Antrim	Glenmore, Davies—Babington '60 *78*.

Probably common.

Fumaria confusa Jord.

Census 29—East 10, Centre 8, West 11.

1	Kerry S.	Kenmare '00: rather rare—Scully.
2	Kerry N.	Ardfert '99: frequent—Scully.
3	Cork W.	Schull '96: frequent—Phillips.
4	Cork Mid	Coachford '96: common—Phillips.
5	Cork E.	Youghal '00: common—Phillips.
6	Waterfd.	Carrickbeg '00—Phillips.
7	Tipp. S.	NW. of Cahir '00—P.
8	Limrck.	Doon '00—P.
9	Clare	Ballyvaughan '95—Colgan.
10	Tipp. N.	Rapla bog near Nenagh '99—P.
11	Kilkny.	Granny '98—P.
12	Wexford	Rosslare '96—Marshall *537*.
13	Carlow	Below St. Mullin's '98—P.
15	Galw. SE.	Portumna and Loughrea '00—Phillips.
16	Galw. W.	Oughterard '95—M. & S. *545*. Inveran; Inishbofin.
17	Galw. NE.	North of Tuam, and Oranmore '99—P.
20	Wicklow	Near Wicklow—More '72 *614*.
21	Dublin	Portrane '00: frequent—Colgan.
23	Westmth.	Knock Drin—Levinge '94 *481*.
24	Longfd.	Granard '99—P.
25	Roscomn.	West of Athlone '99—P.
27	Mayo W.	Mallaranny '99—Marshall.
28	Sligo	Dromore West '96—Colgan.
29	Leitrim	Mohill '00—Somerville.
30	Cavan	Mount Nugent '96—P.
34	Dongl. E.	Inishowen, More—*Fl. Don.*
36	Tyrone	By the Foyle '00—Miss Knowles.
37	Armagh	Armagh and Newry: probably frequent, '92—P.
38	Down	Mourne district f. '89–90—S. & P. *873*. Strammillis.

No doubt common.

Fumaria muralis Sonder.

Census 14—East 7, Centre 4, West 3.

3	Cork W.	Inisherkin '96—Phillips.
7	Tipp. S.	Cahir and Carrick-on-Suir '00—P.
12	Wexford	Wexford '96—Marshall.
14	Queen's	Maryborough esker '96—P.
15	Galw. SE.	South of Kinvarra '00—P.
17	Galw. NE.	By R. Suir at Bellagill bridge '96—P.
18	King's	Common about Edenderry '96—P.
21	Dublin	Howth '95, Colgan—*Cyb.* II.
22	Meath	Oldcastle and Trim '96—P.
25	Roscomn.	By R. Suir at Bellagill bridge '96—P.
31	Louth	Boyne mouth and Dunany '96—P.
37	Armagh	Near Armagh '92—P.
38	Down	Saintfield '93, Waddell—W.B.E.C. '93–4.
39	Antrim	Rathlin '82—Stewart. Malone, Corry—*Fl. NE.*

Probably frequent.

Fumaria densiflora DC.

Census 4—East 2, Centre 0, West 2.

17	Galw. NE.	Frequent around Tuam '99—P.
21	Dublin	Finglas '95—Colgan. Portmarnock '90—Druce *284*.
29	Leitrim	Mohill '00—Somerville.
37	Armagh	NE. of Armagh '92—P.

Fumaria officinalis L.

Census 28—East 14, Centre 6, West 8.

1	Kerry S.	Ballinskelligs '92 : rather rare—Scully.
2	Kerry N.	Killarney '00 : frequent—Scully.
3	Cork W.	Schull '96 : frequent—Phillips.
4	Cork Mid	Coachford '96 : common—Phillips.
5	Cork E.	Castletownroche '00 : common—Phillips.
6	Waterfd.	Carrickbeg '00—Phillips.
7	Tipp. S.	Vale of Aherlow '00, Slievenaman, Fethard—P.
8	Limrck.	Limrck. '99—Somerville. Ringmoylan—Stewart *863*.
9	Clare	Inishmore '95—P. Inishmaan, Inisheer—Hart *365*.
10	Tipp. N.	Roscrea '00—Phillips. Cloughjordan '00—P.
12	Wexford	Enniscorthy '98—P. Saltees '82—Hart *384*.

13	Carlow	Milford '98—P.
14	Queen's	Cullenagh '97, Graigue '98—P.
15	Galw. SE.	Loughrea '00—Phillips. Kilcolgan, Portumna—P.
17	Galw. NE.	Dunmore '00, Ahascragh '96—P.
19	Kildare	Kilkea Castle '99, Kilcock '96—P.
20	Wicklow	Frequent—*Guide* '78.
21	Dublin	Skerries '00 : frequent—Colgan.
22	Meath	Bective '96, Slieve Bregh '00—P. Trim—Stewart.
25	Roscomn.	Athlone '98, R. Suck at Bellagill bridge '96—P.
31	Louth	Dunleer '00, Termonfeckin, Ardee—P.
34	Dongl. E.	‡Common throughout—*Fl. Don.*
35	Dongl. W.	‡Common throughout—*Fl. Don.*
36	Tyrone	Strabane, '96—Miss Knowles.
37	Armagh	Frequent throughout '92—P.
38	Down	Tullymurry '88—P. Frequent—S. & P. *874*.
39	Antrin	Larne '89—P. Frequent—S. & P. *874*.
40	L'derry	Magilligan '97—Mrs. Leebody. Frequent.

Generally assumed to be a common plant, and probably so, but its distribution is still imperfectly known, and is therefore given in detail, so far as existing records go.

Matthiola sinuata R. Br. Sea Stock.

Census 2+(1)—East 1, Centre 0, West 1+(1).

(2	Kerry N.	Beal Castle—Smith 1756 *843*. Not seen since).
9	Clare	Straw Island '94, O'Kelly—*Cyb.* II. Dough—Wade *902*.
12	Wexford	Ballyconigar, Tinnyberna, Kilmuckridge '81—Hart *371*.

Extinct in Kerry, and very nearly so in Clare.

***Cheiranthus Cheiri** L. Wallflower.

Census 27—East 12, Centre 7, West 8.

2	Kerry N.	Ardfert '99—Scully.
3	Cork W.	Bandon '99—Phillips.
4	Cork Mid	Blackrock '99 : frequent—Phillips.
5	Cork E.	Rocks at Myrtlehill, Cork, c., '00 : frequent—Phillips.
6	Waterfd.	Dungarvan '99—P.
7	Tipp. S.	Fethard '00—Phillips. Old walls in many towns.
8	Limrck.	Limerick '99—Somerville.
10	Tipp. N.	Nenagh '00—Phillips.

11	Kilkny.	Kilkenny '00—Phillips. Thomastown '98—P.
13	Carlow	Carlow '00—Miss F. Wynne!
15	Galw. SE.	Loughrea '00—Phillips.
16	Galw. NE.	Galway '00—Phillips.
17	Galw. NE.	Galway '00—Phillips.
19	Kildare	Kildare '97—P.
20	Wicklow	Wicklow '00—C. Waterfall.
21	Dublin	Drimnagh castle '00: rare—Colgan.
22	Meath	Trim and Bective '00—P.
23	Westmth.	Athlone '98—P.
25	Roscomn.	Athlone '98—P.
28	Sligo	Sligo '97—P.
31	Louth	Carlingford! and Drogheda! '00—Mrs. Swan.
32	Monaghn.	Ballybay '00—Somerville.
34	Dongl. E.	Redcastle—*Fl. Don.*
35	Dongl. W.	Donegal, Doe Castle, Rathmullan—*Fl. Don.*
36	Tyrone	Benburb '80—B.N.F.C. *117*.
38	Down	Quoile castle '00—P. Naturalized—S. & P. *874*.
39	Antrim	Larne '98—P. Naturalized—S. & P. *874*.

On old buildings in all the above cases except the Cork East station: abundant and established about a large number of towns, and no doubt occurs in all or nearly all divisions.

Nasturtium officinale R. Br. Watercress.

Divisions all. Common.

Nasturtium sylvestre R. Br.

Census 10—East 4, Centre 4. West 2.

5	Cork E.	R. Suir near Fermoy '84—Hart *388*.
6	Waterfd.	Carrickbeg '00—P. Lismore, c., '96, Currey—*Cyb.* II.
7	Tipp. S.	Clonmel '00—Phillips. Carrick-on-Suir '00—P.
8	Limrck.	Shannon at Limerick, and f. by Lough Gur, '00—P.
11	Kilkny.	Graiguenamanagh '00—Phillips. Barrow and Nore, r.
14	Queen's	Mountrath and Monasterevan, '84—Hart *383*, *388*.
16	Galw. W.	Quay wall at the Claddagh '00—Phillips!
19	Kildare	Barrow below Monasterevan '84—Hart *383*.
27	Mayo W.	†Roadside at Westport '99—Marshall.
33	Ferman.	Belleisle '00—West and Tetley!

Chiefly about the river system of the south-east.

Nasturtium palustre DC.

Census 34—East 14, Centre 12, West 8.

2	Kerry N.	Killarney '88—Scully. Tralee—Scully *823*.
4	Cork Mid	Lough of Cork '96, Ovens—Phillips. R. Lee—*Cyb.* II.
5	Cork E.	Castletownroche '00 : frequent—Phillips.
6	Waterfd.	Cappoquin '00—Phillips. Along the Blackwater only.
7	Tipp. S.	Ardmayle '98—P. F. along the Suir—Hart *385*, and P.
8	Limrck.	Lough Gur '00—P.
9	Clare	Ballyvaughan '95—Colgan. Aran Isles '69—Hart *365*.
10	Tipp. N.	Bushfield '99, Cloughjordan, Barracurra—P.
11	Kilkny.	L. Cullin '98—P. Bennett's Bridge, '84—Hart *388*.
12	Wexford	Enniscorthy '98—P. Frequent.
13	Carlow	Bagenalstown '99—P. Fenagh, Browne—More *614*.
15	Galw. SE.	Garryland, More—*Cyb.* I.
16	Galw. W.	South of Lough Mask '95—M. & S. *545*.
17	Galw. NE.	Killower Lough '99 : frequent—P.
18	King's	Banagher '98—P.
19	Kildare	Kilcock '96—P. F. along R. Barrow—Hart, and P.
21	Dublin	Blackrock '00—P. Rare—Colgan.
22	Meath	Coonen Hill '95, L. Crew, Whitewood, Drogheda—P.
23	Westmth.	L. Ennel—Levinge '84 *484*. L. Iron—*Cyb.* I.
24	Longfd.	Newtowncashel '00—P.
25	Roscomn.	L. Ree v. r. '85–6—B. & V. *113*. Along the Suck.
26	Mayo E.	South of Lough Mask '95—M. & S. *545*.
27	Mayo W.	Ballina '00—P. Foxford, More—*Cyb.* I.
28	Sligo	Ardnaree '00—P.
29	Leitrim	Ballinamore '00—Somerville. Frequent in S. half.
30	Cavan	L. Oughter '96, L. Ramor—P. Tomkin Road.
31	Louth	Kerney's Cross '97, Clogher Head—P. Tinure—*Ir. Fl.*
32	Monaghn.	Rockcorry '00—P. Frequent—Somerville, and P.
33	Ferman.	Belleisle '00—West. Frequent.
36	Tyrone	Lough Neagh '96—Miss Knowles.
37	Armagh	Markethill : throughout, rare, '92—P.
38	Down	Newtownards '91—P. Frequent—*Fl. NE.*
39	Antrim	Glendun '93—Shoolbred *837*. Frequent—*Fl. NE.*
40	L'derry	Kilrea '94—P. Frequent in Bann valley.

Apparently absent from Donegal, but probably the other gaps in its distribution will be filled.

Nasturtium amphibium R. Br. Water Radish.

Census 30—East 10, Centre 12, West 8.

3	Cork W.	R. Blackwater above Mallow '84—Hart *388*.
5	Cork E.	Blackwater near Fermoy '94—P. Ballyhooly—Allin *Fl.*
6	Waterfd.	Clonmel '97—P. Also on the Blackwater.
7	Tipp. S.	Cahir '00, Ardmayle, Thurles—P.
8	Limrck.	Limerick '00—P. C. by R. Shannon—R. D. O'Brien.
9	Clare	Inchiquin L. '99—Miss Knowles. Killaloe; Ennis.
10	Tipp. N.	Youghal Bay '99, Portumna '97—P.
11	Kilkny.	Graiguenamanagh '00—Phillips. Borris—Hart *383*.
13	Carlow	Bagenalstown '99, Borris, Graiguenamanagh—P.
14	Queen's	Erkina R. below Durrow '84—Hart *388*. R. Barrow, r.
15	Galw. SE.	Portumna '98—P.
17	Galw. NE.	Killower Lough '99, and frequent in the east—P.
18	King's	Near Clonmacnoise '99—Colgan. Shannon f., Barrow r.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.
22	Meath	Beauparc '00: local on the Boyne—P.
23	Westmth.	L. Ree, Barrington—Levinge *484*. Athlone—Stewart.
24	Longfd.	Lough Forbes '00—P.
25	Roscomn.	L. Key '97, along R. Suck—P. L. Ree—B. & V. *113*.
26	Mayo E.	Ballinrobe '94—Mrs. Persse! Hollymount—More *600*.
27	Mayo W.	West of Castlebar '99—Marshall. Ballina '00—P.
28	Sligo	Ardnaree '00—P.
29	Leitrim	Ballinamore '00—Somerville. Frequent in S. half.
30	Cavan	L. Oughter and Mt. Nugent '96—P. Tomkin Road.
33	Ferman.	Portora '99—West. Frequent.
34	Dongl. E.	Erne below Ballyshannon—*Fl. Don.*
36	Tyrone	Lough Neagh '96—Miss Knowles.
37	Armagh	Portadown, Charlemont, and f. along L. Neagh '92—P.
38	Down	Lagan Canal c. '92—B.N.F.C. *117*. Lagan only.
39	Antrim	Portmore '86—P. Bann basin only, frequent.
40	L'derry	Kilrea '94—P. Bann basin only, frequent.

Barbarea vulgaris R. Br. Winter Cress.

Divisions all. Frequent throughout.

Barbarea intermedia Boreau.

Census 5—East 4, Centre 0, West 1.

28	Sligo	Lough Key '97—P.
37	Armagh	Armagh &c.,: frequent, especially in N., '92—P.
38	Down	Saintfield '98—P. Frequent—*Fl. NE.*
39	Antrim	Stoneyford '88—P. Frequent—*Fl. NE.*
40	L'derry	Kilrea '94—Mrs. Leebody. ? Frequent.

Almost confined to the north-east, where it is established and widespread.

***Barbarea præcox** R. Br.

Census 8—East 6, Centre 0, West 2.

1	Kerry S.	Kenmare '90—Scully.
3	Cork W.	Baltimore '97—Phillips.
4	Cork Mid	Carrigrohane '96—Phillips. Passage—Power *Fl.*
5	Cork E.	Castletownroche '00, Dodge's glen, Dunkettle—Phillips.
6	Waterfd.	Ardmore, J. Sullivan—*Cyb.* I.
21	Dublin	Garden wall at Lucan '67-72, More—*Cyb.* II.
37	Armagh	Lurgan '92—P.
38	Down	Struell '92—P.

An introduced plant in all cases.

Arabis petræa Lamk.

7	Tipp. S.	Near Lough Curra in the Galtees '80—Hart *372*.
29	Leitrim	Glenade '84—Barrington & Vowel *112*.

Arabis hirsuta Scop. Rock Cress.

Census 27—East 10, Centre 6, West 11.

1	Kerry S.	Derrynane '00—Scully. Rare and local.
2	Kerry N.	Abbeydorney '99 : rather frequent—Scully.
5	Cork E.	Castletownroche '00—Phillips. Castlelyons; Kilcoleman.
7	Tipp. S.	Fethard '00—Phillips.
8	Limrck.	Lough Gur '00—P. Local, common on the limestone.
9	Clare	Blackhead '99—Miss Knowles. Common in N., rare in S.
11	Kilkny.	Kilkenny '00—Phillips. Frequent in centre and N.—P.
13	Carlow	Tullow '99, Bagenalstown, Leighlinbridge—P.
15	Galw. SE.	Gort '00, Oranmore '99—P. Castle Taylor—More *59δ*.

16	Galw. W.	Cong '95—Marshall. Maumeen '82—Hart *380*.
17	Galw. NE.	Knockmae '99—P. Frequent.
19	Kildare	Poulaphuca and Ballymore '00—P.
21	Dublin	St. Doolagh's '99—P.
22	Meath	Beauparc '00—P.
25	Roscomn.	NW. of Athlone '98—P.
26	Mayo E.	Ballinrobe '94—Mrs. Persse! About Cong '95—Marshall.
27	Mayo W.	Killala '59—Moore *574*.
28	Sligo	Annaghmore '00: frequent in east half—P.
29	Leitrim	Glenade, L. Gill, '99—P. Faughrey Mtn. '96—Colgan.
30	Cavan	†Cavan railway station '85—P.
31	Louth	Ballymascanlan—Wade 1804 *902*.
33	Ferman.	Belmore Mountain '00—West. Local.
34	Dongl. E.	Greencastle, Ballyshannon: N. and S., local—*Fl. Don.*
35	Dongl. W.	Ardara, &c.: from N. to S.—*Fl. Don.*
38	Down	Dundrum '99—B.N.F.C. *139*. Murloch—*Fl. Ulst.*
39	Antrim	Tievebulliagh, Brenan—S. & P. *874*.
40	L'derry	Magilligan '97—Mrs. Leebody. Benevenagh, Craignashoke.

Very unequally distributed. Abundant on some of the stretches of limestone in the west, but usually local and rare, though with a wide distribution.

Arabis ciliata R. Br.

Census 5—East 0, Centre 0, West 5.

1	Kerry S.	Near Dingle '83—Hart *381*. Derrynane—Mackay *522*.
3	Cork W.	West extremity of barony of Bere—Drummond '19 *287*.
9	Clare	Ballyvaughan '85—Murray *631*. Inishmore—Hart *365*.
16	Galw. W.	Dog's Bay '85—Linton *502*. Renvyle—Mackay *522*.
35	Dongl. W.	Kincashla Point '94—*Fl. Don.*

There is room for confusion between *A. ciliata* and *A. hirsuta* var. *glabrata*. Inishmore specimens of mine collected as the former prove to be the latter (*803*). Rev. E. S. Marshall believes that the West of Ireland *A. hirsuta* may be *A. ciliata* var. *hispida*.

Cardamine amara L. Bitter Cress.

Census 6—East 3, Centre 2, West 1.

30	Cavan	Killikeen, N. J. Halpin—*Fl. Ulst.* '64.
34	Dongl. E.	Near Ballindrait '93—*Fl. Don.*
36	Tyrone	Favour Royal '87—Hart *392*. Derryloan—*Fl. Ulst.*

38	Down	Canal, Lisburn! '92—Davies. Belvoir Park; Ballyalloly.
39	Antrim	Lagan near Belfast '95—P. Antrim, Stewart—*Fl. NE.*
40	L'derry	Castledawson and near Toome, D. Moore—*Cyb. I.*

Confined to Ulster, where it is rare and local.

Cardamine pratensis L. Lady's Smock, Cuckoo-flower.

Divisions all. Common.

Cardamine hirsuta L.

Divisions all. Common.

Cardamine flexuosa With.

Divisions all, *except 9 Clare*, where it no doubt occurs. Common.

‡Draba muralis L.

Census 4+(1)—East 4+(1), Centre 0, West 0.

(4	Cork Mid	Cork—Power *Fl.* Blarney—*287*. Casuals—Phillips.)
11	Kilkny.	Kilkenny '97, Ballyragget and Jenkinson House '99—P.
21	Dublin	Common on walls at Glasnevin, Scully—*Cyb.* II.
38	Down	Walls at Roger's nursery at Newry '96—Lett!
39	Antrim	Old bridge at Armoy '96—B.N.F.C. *132*.

Seems established on many old walls in Kilkenny, but it is still doubtful if it is a permanent member of the flora, as it has disappeared from several former stations, and appears to be a new-comer in Dublin and possibly elsewhere.

Draba incana L.

Census 8—East 1, Centre 0, West 7.

1	Kerry S.	South side of the Reeks '81—Hart *373*.
16	Galw. W.	South shores of L. Mask (F. J. Foot)—More '72 *614*.
27	Mayo W.	Killala on sandhills '00—P.
28	Sligo	Ben Bulben '00—West and Tetley. East half frequent.
29	Leitrim	Glenade, c., '99—P. Faughrey Mtn. '96—Colgan.
34	Dongl. E.	Near Buncrana and Ballyshannon—*Fl. Don.*
35	Dongl. W.	Mulroy, Ardara, &c.: rare—*Fl. Don.*
40	L'derry	Magilligan sandhills '97—Mrs. Leebody. Benevenagh '93—Shoolbred *837*.

At intervals up the western side from Kerry to Derry.

Erophila vulgaris DC. (*Draba verna* L.) Whitlow-grass.

Divisions all, *except 32 Monaghan and 36 Tyrone*, in which it probably occurs. Frequent in almost all divisions, but becomes rare and local in the north.

Cochlearia officinalis L. Scurvy-grass.

All maritime and most sub-maritime divisions, on coasts and estuaries —namely 1, 2, 3, 4, 5, 6, 8, 9, 12, 15, 16, 17, 20, 21, 22, 27, 28, 29, 31, 34, 35, 37, 38, 39, 40. Also on mountains (var. *alpina*) in 1, 3, 7, 16, 28, 29, 35, 40.

Cochlearia danica L.

Census 21—East 11, Centre 1, West 9.

1	Kerry S.	Caherciveen '92—Scully. Dingle '56—Hind *421*.
3	Cork W.	Baltimore '96 : frequent in the south—Phillips.
4	Cork Mid	Crosshaven, '00 : common—Phillips.
5	Cork E.	Whitegate '00 : common—Phillips.
6	Waterfd.	Clonea '99—P. Dunmore East '89—B. & G. *101*.
9	Clare	Fisherstreet '00—Miss Knowles. Common in N. half.
12	Wexford	Courtown '97—Marshall. Common on the south coast.
15	Galw. SE.	Common at Oranmore '00—P.
16	Galw. W.	Cashel '94—P. Inishbofin '75—More *616*.
17	Galw. NE.	St. Nicholas Church Galway '99—P. F. about Galway.
20	Wicklow	Bray Head '96, Scully—*Cyb.* II. Rare ?
21	Dublin	Kingstown '00 : frequent—Colgan.
28	Sligo	Ballysadare and Rosses Point '97—P.
29	Leitrim	On the coast '97—P.
31	Louth	Greenore '00—P.
35	Dongl. W.	Rosapenna, Dunfanaghy, Ballyvoyle : rare ?—*Fl. Don.*
36	Tyrone	By the Foyle, '96—Miss Knowles.
37	Armagh	Newry River '92—P.
38	Down	Killough '00—P. Rare—*Fl. NE.*
39	Antrim	Portrush '00—Tetley. Rare—*Fl. NE.*
40	L'derry	Portstewart '00—Miss Knowles. Rare ?

Maritime divisions all, except 2, 8, 22, 27, 34. Rather local round the coast.

Cochlearia anglica L.

Census 10—East 6, Centre 2, West 2.

1	Kerry S.	Kenmare '99 (Scully)—Phillips.
3	Cork W.	Skibbereen '96—Phillips.
4	Cork Mid	Rochestown '00: f. about Cork harbour—Phillips.
5	Cork E.	Rossmore '00: frequent near Cork harbour—Phillips.
6	Waterfd.	Tramore '99—Phillips.
8	Limrck.	Foynes '99—Somerville. Limerick—Hb. L.F.C!
11	Kilkny.	New Ross '00—Phillips. Frequent by tidal waters—P.
12	Wexford	Courtown '97—Marshall. C. on southern estuaries.
36	Tyrone	By the Foyle, common, '96—Miss Knowles!
40	L'derry	New Buildings at Londonderry '95—Mrs. Leebody!

South coasts, with an outlying habitat along the Foyle. Possibly more widespread than would appear by the present records.

***Hesperis matronalis** L. Dame's Violet.

Census 10—East 6, Centre 3, West 1.

3	Cork W.	Near Schull, garden outcast, '96—Phillips.
4	Cork Mid	Mountdesart, Blarney—Power *Fl.* Outcasts—Phillips.
5	Cork E.	Glanworth—Allin *Fl.* Youghal—Power *Fl.* Escapes—Phillips.
12	Wexford	Rockmount, J. Morrison—More '72 *614*.
20	Wicklow	Poulaphuca (Barrington), and Dargle—*Guide* '78.
25	Roscomn.	Rockingham, D. Moore—More '72 *614*.
30	Cavan	Oldcastle, N. J. Halpin—*Flor. Hib.* '36.
33	Ferman.	Near Derrygonelly '99—West.
38	Down	‡Ballylesson and Castlereagh—*Fl. Belfast.* '63.
39	Antrim	Shane's Castle, Corry—*Fl. NE.*

I include this species out of deference to the views of the editors of the second edition of *Cybele*. I have never seen it except as an obvious escape or casual, and not worth noting.

Sisymbrium Thalianum J. Gay. Thale Cress.

Census 28—East 14, Centre 6, West 8.

1	Kerry S.	Caragh Lake '00: rare and local—Scully.
2	Kerry N.	Killarney '99: rare—Scully.
3	Cork W.	Skibbereen '97: rare—Phillips.
4	Cork Mid	Blackrock '00 (Scully): frequent—Phillips.

5	Cork E.	Whitegate '00: frequent—Phillips.
6	Waterfd.	Clonmel '97—P.
7	Tipp. S.	Fethard '00—Phillips. Frequent.
8	Limrck.	Curragh Chase! '00—O'Brien. Adare; Limerick.
9	Clare	Ballyvaughan '00—Miss Knowles. Inishmore—*Cyb.* II.
10	Tipp. N.	Ballina '99—P.
11	Kilkny.	Thomastown '00—Phillips. Lismaine House '99—P.
12	Wexford	Wexford '96—Marshall.
13	Carlow	Tullow '99, Borris, Leighlinbridge—P.
14	Queen's	Mountrath '97, Maryborough '96—P.
17	Galw. NE.	North-east of Galway '00—Phillips.
18	King's	Birr '00—Phillips.
20	Wicklow	Coolkenna '99—P. Not rare in the NE.
21	Dublin	Bailey '96, McArdle—Hb. Glasnevin! Rare—Colgan.
22	Meath	Drogheda '96—P. Slane—*Ir. Fl.*
26	Mayo E.	Ballinrobe '93—Mrs. Persse!
27	Mayo W.	Moyne Abbey '00—P.
29	Leitrim	Drumahaire '99—P.
31	Louth	Louth abbey '96—P.
34	Dongl. E.	Pennyburn, W. E. Hart—*Fl. Don.*
37	Armagh	Lurgan & Portadown '92 (P.); Ardmore (Lett)—P. *701.*
38	Down	Movilla, Stewart—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Rare—*Fl. NE.*
40	L'derry.	Garvagh '99—Miss Knowles. Rare—*Fl. NE.*

Sisymbrium officinale Scop. Hedge Mustard.

Divisions all. Common.

‡ **Sisymbrium Sophia** L. Flixweed.

Census 7+(1)—East 6+(1), Centre 1, West 0.

6	Waterfd.	Passage, Miss S. Grubb—*Cyb.* I.
8	Limrck.	‡Limerick '97, Bentley—Hb. L.F.C.!
19	Kildare	‡Kilcock, roadside, '96—P.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.
21	Dublin	‡Rogerstown '00—Colgan. †Chiefly along the coast, f.
22	Meath	†Mornington '93—P.
31	Louth	†Blackrock, Anagassan '96—P. Dundalk—*Fl. Ulst.*
(39	Antrim	*Greenisland '93—Mrs. White Spunner! S., rare casual.)

Fully established along the coast of Dublin; little more than a casual in other stations.

†Sisymbrium Irio L. London Rocket.

21 Dublin Windy Harbour '00—P. Suburbs of Dublin, frequent.

Sisymbrium Alliaria Scop. Jack-by-the-hedge.

Census 33—East 14, Centre 11, West 8.

1 Kerry S. ‡Kenmare '00—Scully.
2 Kerry N. Killarney '99: rare and local—Scully.
4 Cork Mid Leemount—Power *Fl.* '45. Blarney—Drummond *287*.
5 Cork E. Castletownroche '00: rare—Phillips.
6 Waterfd. Near Clonmel—Miss S. Grubb '00.
7. Tipp. S. Cahir '00—P. Frequent.
8 Limrck. Lough Gur and Doon '00—P.
9 Clare Inishmore (Fitzgerald) '95—P. *738*. Inishmann—*365*.
10 Tipp. N. Toomavara '00, Silvermines '99—P. Borrisoleigh.
11 Kilkny. Thomastown '00—Phillips. Frequent along Nore—P.
13 Carlow Ballintemple '99, Borris '98—P.
14 Queen's Mountrath '97—P. Frequent.
18 King's Geashill '96—P. Frequent.
19 Kildare Kilcullen '96—P.
20 Wicklow Killoughter '97—P. Frequent in NE.
21 Dublin Drimnagh '00: frequent—Colgan.
22 Meath Kilmessan '96—P. Common.
23 Westmth. Knock Drin and L. Deravaragh—Levinge '94 *484*.
24 Longfd. Lough Forbes and near Roosky '00—P.
27 Mayo W. Killala '00—P.
28 Sligo Knocknarea '97—P. Frequent.
29 Leitrim Manorhamilton '99: throughout—P.
30 Cavan Ballyconnell '00—Somerville. Cavan '96—P.
31 Louth Braganstown '97, Killencoole '96—P.
32 Monaghn. Newbliss '00—P. Near Clones—Corry '82 *243*.
33 Ferman. Enniskillen '99—P. Common.
34 Dongl. E. Lag '98—Hart *405*. Along the Erne—*Fl. Don.*
35 Dongl. W. Above Fort Stewart ferry—*Fl. Don.*
36 Tyrone Strabane '96—Miss Knowles. Benburb—*Cyb.* II.
37 Armagh Loughgall, &c.: north only, frequent, '92—P.
38 Down Rostrevor '90—P. Rare—*Fl. NE.*
39 Antrim Carnlough '87—P. Frequent—*Fl. NE.*
40 L'derry Umbra Rocks, D. Moore—*Fl. NE.*

Very unevenly distributed in the divisions, as the above will show; and generally rare in the west, from Kerry to Donegal.

***Erysimum cheiranthoides** L.

Census 13—East 3, Centre 7, West 3.

4	Cork Mid	Sunday's Well; Evergreen: casuals—Phillips.
7	Tipp. S.	Ballinure casual '98—P.
10	Tipp. N.	Borrisokane '00—Phillips. Frequent and established.
15	Galw. SE.	Near Portumna, M. Dowd—More '72 *614*.
16	Galw. W.	Claddagh '00—Phillips.
18	King's	Banagher '98—P.
21	Dublin	Templeogue—Threlkeld 1726 *886*.
23	Westmth.	Knock Drin—Levinge '94 *484*.
24	Longfd.	Newtowncashel '00—P.
25	Roscomn.	Hudson's Bay on Lough Ree '85–6—B. & V. *113*.
33	Ferman.	Florencecourt station '99 and '00—West.
35	Dongl. W.	Mulroy "abundant garden weed"—*Fl. Don*.
39	Antrim	Near Ballinderry '37, D. Moore—*Cyb*. II.

Except in Tipperary little more than casual, but it is increasing in Ireland, and will probably soon be a permanent member of the flora.

Subularia aquatica L. Awl-wort.

Census 6+(5)—East (4), Centre 0, West 6+(1)

1	Kerry S.	Connor Hill '90: rare and local—Scully.
2	Kerry N.	Killarney '94: south only—Scully.
3	Cork W.	Gougane Barra, Harvey—*Cyb*. I.
9	Clare	Between Milltown and Kilkee, D. Moore—*Cyb*. I.
16	Galw. W.	Glendalough '95—Praeger & Carr *804*. Rare, local.
27	Mayo W.	Mweelrea '82—Hart *380*.
(35	Dongl. W.?	Lough Carban—E. Murphy '29 *629*. Not seen since—*Fl. Don*.)
(37	Armagh	Lough Neagh—*Cyb*. I. Canal at Newry—*Fl. Ulst*. Not seen since—extinct?)
(38	Down	Lough Neagh—Harris 1744. Canal at Newry—*Fl. Ulst*. Extinct?)
(39	Antrim	Common along Lough Neagh, D. Moore—*Cyb*. I. Now extinct?)
(40	L'derry	Lough Beg '70, Bann near Coleraine—*Fl. NE*. Now extinct?)

Apparently gone from the north-east, chiefly owing to the lowering in 1855 of Lough Neagh, where the plant formerly grew abundantly.

‡Brassica Rapa L. var. **Briggsii** H. C. Wats.

Census 39—East 15, Centre 13, West 11.

1	Kerry S.	*Kenmare '00 : common—Scully.
2	Kerry N.	*Listowel '99 : common—Scully.
3	Cork W.	*Dunmanway '00 : frequent—Phillips.
4	Cork Mid	*Donoughmore '96 : common—Phillips.
5	Cork E.	*Cork '00 : common as a relic of cultivation—Phillips.
6	Waterfd.	Curraghmore '00, Clonmel '97—P.
7	Tipp. S.	Cahir '00 : frequent—P.
8	Limrck.	Limerick, Killonan, Lough Gur, '00—P.
9	Clare	Kilfenora '00—Miss Knowles. Rare.
10	Tipp. N.	‡Cloughjordan '00—P.
11	Kilkny.	Thomastown '98—P.
12	Wexford	Enniscorthy '98—P. Alderton—B. & M. *MS.*
13	Carlow	Tullow '99, Leighlinbridge '98—P.
14	Queen's	Maryborough '96—P.
15	Galw. SE.	Loughrea '00—P.
16	Galw. W.	S. shores L. Mask, c., wild—Marshall '99 *541*.
17	Galw. NE.	Rinmore '00—Phillips. Dunmore '00—P.
18	King's	Birr '00—Phillips. Edenderry '96—P.
19	Kildare	Castletown '00, Carbury, Ballymore—P.
20	Wicklow	Enniskerry and Greystones '94—P.
21	Dublin	Howth, &c. '99—P.
22	Meath	Kilmessan '00—P. Frequent.
23	Westmth.	Knock Drin '95 Levinge—W.B.E.C. '95–6 *912*.
24	Longfd.	Lough Gowna and near Roosky '00—P.
25	Roscomn.	Athlone '98—P.
26	Mayo E.	Foxford '00—P. S. shores L. Mask, wild—Marshall *541*.
27	Mayo W.	Achill Sound, Mallaranny, '99—Marshall. Ballina—P.
29	Leitrim	‡Ballinamore '00—P. Not rare.
30	Cavan	Farnham '96—P.
31	Louth	Ballymascanlan '00, Dunany, Drogheda—P.
32	Monaghn.	Annaghmakerig Lake '00—P.
33	Ferman.	Florencecourt '00—P.
34	Dongl. E.	‡Frequent throughout—*Fl. Don.*
35	Dongl. W.	‡Frequent throughout—*Fl. Don.*
36	Tyrone	By the Foyle '00—Miss Knowles.
37	Armagh	Common '92—P.
38	Down	Saintfield '99—P. Common—*Fl. NE.*

39 Antrim Rathlin '89—P. *683*. Common—*Fl. NE.*
40 L'derry Magilligan '94—P. Common—*Fl. NE.*

This, the *Brassica campestris* of Irish records, is distributed in more or less abundance over the whole country, and in many districts appears thoroughly naturalized, growing profusely on rough banks and waste ground, and on bare limestone "crags" in the west.

Brassica nigra Koch. Black Mustard.

Census 13+(2)—East 5+(2), Centre 2, West 6.

1 Kerry S. Waterville '00: rather rare and local—Scully.
2 Kerry N. Ballybunnion '99: rather frequent—Scully.
3 Cork W. Crookhaven '96: rare—Phillips.
4 Cork Mid Crosshaven '00: rare—Phillips.
5 Cork E. Eastferry '00: f. about Cork Harbour—Phillips.
8 Limrck. ‡Limerick '00—P.
9 Clare Kilfenora, Ballyvaughan, '00—Miss Knowles. N., rare.
12 Wexford Rosslare '97—Marshall *539*. F. and native in SE.
16 Galw. W. ‡Inishbofin '75—More *616*.
20 Wicklow Greystones '00—P. Blackstones, D. Moore—*Cyb.* I.
21 Dublin Skerries '00: seems native—P. Rare—Colgan.
31 Louth Dunany '96—P.
35 Dongl. W. ‡Mountcharles—*Fl. Don.*
(39 Antrim Larne—More *614*. *Belfast, &c.: casual—*Fl. NE.*)
(40 L'derry *Kilrea, D. Moore: casual—*Fl. NE.*)

Native or naturalized on the south and east coasts (1, 2, 3, 4, 5, 12, 20, 21, 31), and in Clare. Apparently not established elsewhere. Not seen in the north-east for half a century.

Brassica Sinapis Visiani. Charlock.

Divisions all. Abundant.

Brassica alba Boiss. White Mustard.

Census 33—East 13, Centre 9, West 11.

1 Kerry S. *Derrynane '96: little more than casual—Scully.
2 Kerry N. ‡Kilfenora '94: rare—Scully.
3 Cork W. Baltimore '96: rare—Phillips.
4 Cork Mid Ringaskiddy '00 (Scully): frequent on coast—Phillips.

5	Cork E.	Near Cork '00: frequent—Phillips.
6	Waterfd.	Dungarvan '99—P. Not common.
8	Limrck.	Limerick '00—P. Singland '97, Bentley—Hb. L.F.C.!
9	Clare	Kilfenora '00—Miss Knowles. C. in Burren and Aran.
10	Tipp. N.	Toomavara '00: frequent throughout—P.
11	Kilkny.	Thomastown '98, Kilkenny '97—P.
12	Wexford	Enniscorthy '98—P. Priesthaggard—B. & G. *100.*
13	Carlow	Goresbridge '99, Borris, Bagenalstown—P. Frequent.
14	Queen's	Maryborough '96: frequent—P.
15	Galw. SE.	Woodford '98: frequent throughout—P.
16	Galw. W.	Ross '99—P. Frequent in SE., very rare elsewhere.
17	Galw. NE.	Tuam '99: common throughout—P.
18	King's	Lough Goura '98—P.
19	Kildare	Kildare '97: throughout, not rare—P.
20	Wicklow	Kilmacanoge '94—P. Bray; Greystones. Rare?
21	Dublin	Baldoyle '00: frequent—Colgan.
22	Meath	Laytown '96—P.
23	Westmth.	Moate and Athlone '99—P.
24	Longfd.	Newtowncashel and Ballymahon '00—P.
25	Roscomn.	Corkip Lough '99: common in south half—P.
26	Mayo E.	Claremorris, common; Foxford, Ballyhaunis, '00—P.
27	Mayo W.	Achill Sound '99—Marshall. Common.
28	Sligo	Ballysadare '00—P. Very frequent.
31	Louth	Dunleer '00: frequent throughout—P.
34	Dongl. E.	‡Glenmore and Laghy—*Fl. Don.*
35	Dongl. W.	‡Churchill rare—*Fl. Don.*
36	Tyrone	Castleisland '96: rare—Miss Knowles.
38	Down	Ardglass '92—P. In S. half only, very local.
40	L'derry	Abundant at Magilligan, Tennant—*Fl. NE.*

Quite unequally distributed, but probably in all divisions. Commoner in the west than in the east, and becoming scarce and local in the north.

‡**Diplotaxis muralis** DC. Wall Mustard.

Census 17—East 8, Centre 5, West 4.

3	Cork W.	Clonakilty '96 (Scully), Millstreet '00—Phillips.
4	Cork Mid	East of Millstreet '00—Phillips.
5	Cork E.	Fota and Tivoli '00—Phillips.
6	Waterfd.	Ardmore, on cliffs and sand, J. Cooke—*Cyb.* I.

7	Tipp. S.	Bansha '00—Phillips. Holycross, Vowell—*Cyb.* II.
8	Limrck.	Killonan '00—P. Limerick '97, O'Brien—Hb. L.F.C.!
9	Clare	Ballyvaughan '00—Miss Knowles!
10	Tipp. N.	Templemore '00—Phillips.
17	Galw. NE.	Near Galway '00—P.
20	Wicklow	Wicklow '90, Levinge—*Cyb.* II.
21	Dublin	Sutton! '00—Colgan. Local, chiefly on G. N. Railway.
22	Meath	Laytown '96, Enfield '99—P.
23	Westmth.	West of Moate '99—P.
25	Roscomn.	West of Athlone, and east of Ballinasloe '99—P.
28	Sligo	Ballysadare '00—P. Sligo harbour '96—Colgan.
31	Louth	Dunleer '00, Ardee, Castlebellingham—P.
37	Armagh	Wellington cutting near Newry '92—P. *705*.

An interesting colonist, spreading rapidly along railways. First noticed at Portmarnock, Dublin, in 1837. Confined to railway tracks, except in 3, 6, 9, 21 and 28.

Capsella Bursa-pastoris Mœnch. Shepherd's Purse.

Divisions all. Common.

‡Senebiera didyma Pers.

Census 23—East 11, Centre 4, West 8.

1	Kerry S.	Kenmare '99: rare, locally abundant—Scully.
2	Kerry N.	Tralee '99: rather rare—Scully.
3	Cork W.	Dunmanway '00: frequent in the south—Phillips.
4	Cork Mid	Crosshaven '00: common—Phillips.
5	Cork E.	Youghal '00: common—Phillips.
6	Waterfd.	Kilmacthomas '99: common throughout—P.
7	Tipp. S.	Fethard '97—P. Common in the south.
8	Limrck.	Rathkeale '97—O'Brien! F. along R. Shannon.
9	Clare	Malbay '99—Miss Knowles. Coast c., r. inland.
10	Tipp. N.	Dromineer '96—Colgan.
11	Kilkny.	Callan '00—Mrs. Persse! Suir, Nore, and Barrow, f.
12	Wexford	Fishertown—B. & M. '93 *103*. Frequent on coast.
13	Carlow	Leighlinbridge '99: common along R. Barrow—P.
14	Queen's	Graigue '98—P.
15	Galw. SE.	Gort '00, Oranmore, Kinvarra—P. Frequent in west.
16	Galw. W.	Clifden '98—Colgan. Coast, rare but widespread.
17	Galw. NE.	Tuam, and common on coast, '99—P.

20	Wicklow	Wicklow '00—C. Waterfall.
21	Dublin	Booterstown '00—Colgan. Rare, chiefly about Dublin.
27	Mayo W.	Newport and Achill Sound '99—Marshall.
31	Louth	Carlingford abundant '00—P.
38	Down	Killough '98—Davies *136*. Dundrum '87—P.
39	Antrim	Giant's Causeway '94—Miss Knowles! Magheramorne, Stewart—*Fl. NE.*

Chiefly about towns. Has its headquarters in the south, where it is abundant inland as well as near the sea. As we pass northward it becomes confined to the coast, and less frequent, and in Ulster is very rare, and only just establishing itself. The Portstewart plant of *Suppl. Fl. NE.* is *S. Coronopus*.

Senebiera Coronopus Poiret. Swine's Cress.

Census 28—East 14, Centre 5, West 9.

1	Kerry S.	Valentia '92: rare, locally abundant—Scully.
2	Kerry N.	Ardfert '99: locally abundant—Scully.
3	Cork W.	Skibbereen '96: frequent in the south—Phillips.
4	Cork Mid	Crosshaven '00: frequent near the sea—Phillips.
5	Cork E.	Youghal '00: common—Phillips.
6	Waterfd.	Dunmore '97—P. Not common—Hart *384*.
7	Tipp. S.	Cashel '98, Carrick-on-Suir '00—P.
8	Limrck.	Askeaton and Limerick '00—P.
9	Clare	Blackhead '99—Miss Knowles. Frequent on coast.
10	Tipp. N.	Dromineer '99—P.
11	Kilkny.	Thomastown '98—P. Frequent in tidal places.
12	Wexford	†Enniscorthy—B. & M. '92 *102*. Frequent on coast.
13	Carlow	Goresbridge '99—P.
15	Galw. SE.	Ardfry '99: common on coast—P.
16	Galw. W.	Clifden '98—Colgan. Coast, at intervals.
17	Galw. NE.	Tuam, and common on coast, '99—P.
19	Kildare	Curragh '97, Athy, Leixlip—P.
20	Wicklow	Greystones '00—P. Rare?
21	Dublin	Skerries '00: local—Colgan.
22	Meath	*Navan and Kilmessan '96—P.
23	Westmth.	Near Athlone ('85–6, B. & V.)—Levinge *484*.
24	Longfd.	Newtowncashel and south of Lanesborough '00—P.
27	Mayo W.	Killala '00—P. Downpatrick Head, Dickie—*Fl. Ulst.*
31	Louth	Dundalk '00: coast, frequent—P.

34 Dongl. E. Doagh Island '98—Hart *405*. ‡N. Inishowen—*Fl. Don.*
38 Down Newcastle '99—P. Frequent—*Fl. NE.*
39 Antrim Ballycastle '97—P. Frequent—*Fl. NE.*
40 L'derry Portstewart '94—Mrs. Leebody!

Inland stations decrease as we pass northward, and in the north-west the plant becomes extremely rare, even on the coast.

†Lepidium latifolium L. Dittander.

Census 5+(1)—East 3, Centre 0, West 2+(1).

(1 Kerry S. Near head of Kenmare River—Smith 1750 *843*.)
3 Cork W. Near the Old Fort opposite Kinsale '72—Allin *14*.
4 Cork Mid Kinsale '92 –Phillips.
5 Cork E. Corkbeg '00—Phillips. Spike Island—Drummond *287*.
6 Waterfd. East side of Youghal harbour—Smith 1746 *844*.
8 Limrck. About Limerick, established! '00—R. D. O'Brien.

Established near the sea in the south.

†Lepidium campestre R. Br. Pepperwort.

Census 8—East 5, Centre 2, West 1.

7 Tipp. S. Near Clonmel—Miss S. Grubb '00.
8 Limrck. Limerick '99—Somerville. Ballysimon—Hb. L.F.C.!
11 Kilkny. "The Rocks" Kilkenny, S. Madden—*Cyb.* I.
13 Carlow One mile west of Carlow, J. Sim—*Cyb.* I.
15 Galw. SE. South of Kinvarra '00—P.
37 Armagh Benburb, c., '00—Davies *272*. North only, rare, '92—P.
38 Down Killowen ['90]—S. & P. *873*.
39 Antrim Crumlin '86—D. Redmond! About L. Neagh only, f.

The Cork, Dublin and Louth records (see *Cybele*) appear very doubtful.

Lepidium hirtum Smith (*L. Smithii* Hook).

Census 26+(1)—East 15, Centre 8, West 3+(1).

1 Kerry S. Kenmare '00: rather common—Scully.
2 Kerry N. Abbeydorney '99: rather frequent—Scully.
3 Cork W. Dunmanway '00: common—Phillips.
4 Cork Mid Donoughmore '96: common—Phillips.

5	Cork E.	Whitegate '00 : common—Phillips.
6	Waterfd.	Bunmahon '99 : frequent throughout—P.
7	Tipp. S.	Clonmel and Carrick-on-Suir '00—Phillips.
8	Limrck.	Doon '00—P. †Limerick '97, Bentley—Hb. L.F.C.!
10	Tipp. N.	Toomavara '00 : frequent in SW. half—P.
11	Kilkny.	Inistioge '00—Phillips. Frequent.
12	Wexford	Wexford '97—Marshall. Common.
13	Carlow	Common in eastern three-fourths '98–9—P.
14	Queen's	West of Carlow '98—P.
19	Kildare	Rathmore '98—P. Ballitore, Mullaghcreelan—*Cyb.* I.
20	Wicklow	Avondale '99 : frequent throughout—P.
21	Dublin	Howth '00 : local—Colgan. Frequent in south—P.
22	Meath	Slieve Bregh '00—P.
24	Longfd.	Lough Gowna '00—P.
30	Cavan	Drumhawnagh '00, Lough Ramor '96—P.
31	Louth	Ballymascanlan '00, †Ardee '97—P.
32	Monaghn.	Drumreaske '00—Kane. L. Avaghon, Newbliss, '00—P.
(35	Dongl. W.*	Manor Vaughan '79—*Fl. Don.*)
36	Tyrone	Dungannon '98—Mrs. Leebody. Cookstown.
37	Armagh	Common in southern two-thirds '92—P.
38	Down	Ardglass '00—P. Common—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Errigal Banks '93—P. Rare—*Fl. NE.*

Absent from the west and north-west. The line of the Shannon continued north-eastward to the Foyle, practically marks the western limit of this species. In the area in which it does occur it is distinctly calcifuge.

†Thlaspi arvense L. Penny Cress.

Census 15+(3)—East 12+(2), Centre 1, West 2+(1).

(3	Cork W.	Near Roscarbery—Power *Fl.* '45. Casual—Phillips.)
(4	Cork Mid	Cork, casual, '91—Scully *832.*)
(5	Cork E.	Weed at Fota '96—Phillips.)
6	Waterfd.	Cappoquin plentifully—Smith 1746 *844.*
8	Limrck.	Askeaton '85–6—Stewart *863.*
9	Clare	Inishmore '95—P.
11	Kilkny.	Freshford, S. Madden—*Cyb.* I. Very rare.
12	Wexford	Frequent near New Ross—B. & G. '89 *100.*
13	Carlow	Clonmore Castle, T. Chandlee—*Cyb.* I.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.

21	Dublin	Baldoyle '00: rare—Colgan.
22	Meath	Navan and Nurney, Annot. in Threlkeld—*Cyb.* II.
28	Sligo	Cliffony, and near Ben Bulben, '79—Stewart.
31	Louth	Clogher Head '37—J. Ball *93*.
37	Armagh	Portadown '92—P. Loughgall '54—More *600*.
38	Down	Killowen ['89]—S. & P. *873*.
39	Antrim	‡Ballymena '99—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Umbra Rocks, D. Moore—*Cyb.* I. Magilligan—*629*.

A plant of uncertain appearance, and seldom permanent. Chiefly in the east, like many weeds of cultivation.

†**Teesdalia nudicaulis** R. Br.

36	Tyrone	Washing Bay on L. Neagh '96, Mrs. Leebody—P. *747*.
38	Down	‡Lambeg '99—Davies *268*.
39	Antrim	‡Glenmore '98—Davies *264*.

Plentiful in the Lough Neagh station, where it makes a good claim to native or naturalized rank. Sand is brought by boats from the spot, and apparently by this means the plant has recently spread to its Down and Antrim habitats, which are beside the Lagan canal.

Crambe maritima L. Sea-Kale.

Census 6+(4)—East 5+(1), Centre 0, West 1+(3).

(3	Cork W.	Strand near Bantry—Drummond '19 *287*).
4	Cork Mid	†Rochestown '00—Phillips. Douglas '40—Power *Fl.*
5	Cork E.	†Dunkettle '00 and †Harpur's Island '98—Phillips.
9	Clare	Black Head '95, Colgan—*Cyb.* II. Inishmore '95—P.
20	Wicklow	"The Breeches" on Murrough '70, Hart—More *614*.
21	Dublin	Ireland's Eye '94—P. Sutton—*Cyb.* II. Almost extinct.
(34	Dongl. E.	Doagh I. '96—Hart *405*. Norway Point. Extinct?)
(35	Dongl. W.	Tory I., Hyndman spec.—Corry '82 *243*. Extinct?)
38	Down	Knockinelder '76, Stewart—*Fl. NE.*
(39	Antrim	Rathlin, destroyed before Templeton's time—*Fl. NE.*)

Now extinct in various additional stations mentioned by the older botanists, and still decreasing. The Inishmore station is the only one in which more than a stray plant now grows.

Cakile maritima Scop. Sea Rocket.

In nearly all the east coast divisions—namely, 5, 6, 12, 20, 21, 22, 31, 38, 39, 40. Much rarer on the west coast—1, 2, 3, 9, 16, 34, 35. Absent from 4, 15, 17, 27, 28, 29.

Raphanus Raphanistrum L. Wild Radish.

Census 35—East 14, Centre 10, West 11.

1	Kerry S.	Waterville '00 : rather frequent—Scully.
2	Kerry N.	Ballybunnion '94 : rather frequent—Scully.
3	Cork W.	Baltimore '96 : rare—Phillips.
4	Cork Mid	Crosshaven '00—Phillips.
5	Cork E.	Youghal '00 : frequent—Phillips.
6	Waterfd.	Ballyscanlan '99—P.
8	Limrck.	Newtown '00—R. D. O'Brien! ‡Limerick '00—P.
9	Clare	Inishmore '95—P. Inishmaan, Inisheer—Hart *365*.
10	Tipp. N.	Nenagh '00—Phillips.
12	Wexford	Wexford '97—Marshall. Saltees '82—Hart *384*.
13	Carlow	Carlow '98—P.
16	Galw. W.	Roundstone'96, Oughterard—P. ‡Inishbofin—More *014*.
17	Galw. NE.	Dunmore '00—P.
18	King's	*Clara '99—P.
19	Kildare	Hills above Rathmore '98—P.
20	Wicklow	Kilmacanoge '94—P.
21	Dublin	Portrane '00 : frequent—Colgan.
22	Meath	Slieve-na-calliagh and Slieve Bregh '00—P.
23	Westmth.	Drinmore—Levinge '94 *484*; and rare in the west.
24	Longfd.	Carn Clonhugh '98—P.
26	Mayo E.	Claremorris '00—P. Frequent.
27	Mayo W.	Mallaranny '99—Marshall. Common.
28	Sligo	Dromore West '96—Colgan.
29	Leitrim	Garadice Lough '00—P.
30	Cavan	Slieve Glah and Lough Ramor '96—P.
31	Louth	Dundalk '96 : frequent on the coast—P.
32	Monaghn.	Culloville '96—P. Frequent.
33	Ferman.	Florencecourt '00—P.
34	Dongl. E.	†Frequent throughout—*Fl. Don.*
35	Dongl. W.	†Frequent throughout—*Fl. Don.*
36	Tyrone	Omagh '96 : rare—Miss Knowles.

37 Armagh Frequent throughout '92—P.
38 Down Dundrum '98—P. Rare—*Fl. NE.* F. in S.—*873.*
39 Antrim Carrickfergus '00—Miss Knowles. Rare—*Fl. NE.*
40 L'derry. Between Kilrea and Garvagh '94—P. Rare—*Fl. NE.*

Distinctly calcifuge, and in the divisions where limestone prevails the stations are generally on patches of non-calcareous rocks: the Aran Islands form a notable exception.

Raphanus maritimus Smith. Sea Radish.

Census 14+(1)—East 6+(1), Centre 0, West 8.

1 Kerry S. Kenmare '00: rare—Scully.
2 Kerry N. Ballybunnion '94: rare—Scully.
3 Cork W. Castle Island in Schull Bay '72—Allin *Fl.*
6 Waterfd. Dungarvan '99—P. Frequent on coast—Hart *384.*
9 Clare Inishmore '95—P. Inishmaan '69—Hart *365.*
12 Wexford Wexford '96—Marshall *537.* Rare.
16 Galw. W. Roundstone '96—P. And on several islands.
17 Galw. NE. Ballyloughaun '99—P.
(20 Wicklow Once found at Greystones—*Guide* '78).
21 Dublin Rogerstown '00; rare—Colgan.
28 Sligo Between Sligo and Ballina '37—J. Ball *93.*
31 Louth Whitestown '00—P.
34 Dongl. E. Knockglass '98—Hart *405.* North only, rare.
38 Down Ballyhalbert '97—P. Rare—*Fl. NE.*
39 Antrim Curran of Larne '89—P. Rare—*Fl. NE.*

†**Reseda lutea** L. Wild Mignonette.

Census 21—East 11, Centre 3, West 7.

1 Kerry S. Kenmare '90—Druce *284.*
3 Cork W. Desert, C. Longfield—Allin *Fl.* '83.
5 Cork E. ‡Midleton '95—Phillips. Castlelyons—Power *Fl.*
6 Waterfd. Dungarvan '40—Power *682.* Fairy Hill—*Cyb.* I.
8 Limrck. ‡Limerick '00—P.
9 Clare Inishmore '95—P. *738.*
11 Kilkny. Kilkenny '96—Mrs. Persse!
12 Wexford Tinnyberna '81—Hart *371.* ‡Fisherstown; Enniscorthy.
13 Carlow Bagnalstown '99—P.
14 Queen's R. Barrow below Athy, Scully—*Cyb.* II.

17 Galw. NE. Lough Atalia '99—P.
19 Kildare Leixlip '94—P.
20 Wicklow North of Wicklow, Levinge—*Cyb.* II.
21 Dublin Rogerstown '00: local—Colgan.
22 Meath Kilmessan '96, Laytown, Gormanstown—P. Rare.
27 Mayo W. *Newport '99—Marshall.
30 Cavan *Cavan railway station, Levinge—*Cyb.* II.
31 Louth Clogher Head '96—P. Not rare on the coast.
34 Dongl. E. *Greencastle, W. E. Hart—Hart *377*.
35 Dongl. W. *Rosapenna "apparently established"—*Fl. Don.*
39 Antrim Ballycastle '00—Mrs. Swan. Rare.

Seems fully naturalized in Dublin, Meath, Louth, and Antrim: elsewhere its standing is dubious.

Reseda Luteola L. Weld; Dyer's Weed.

Divisions all, *except 29 Leitrim*, where it will probably be found to occur. Rather calcicole, and preferring gravelly soils.

Helianthemum guttatum Mill. Rock-Rose (genus).

3 Cork W. Three Castle Head '96—Phillips.
16 Galw. W. Inishbofin, abundant, '97, Barrington—*Cyb.* II. Inishark, abundant, '75—More *616*.

The var. *Breweri* accompanies the type at Three Castle Head and Inishbofin, and alone grows on Inishark.

Helianthemum vineale Pers.

9 Clare Cliffs of Moher '98, G. Fogerty—Hb. L.F.C.! Burren and Aran local.
16 Galw. W. Half a mile west of Salthill '93, F. K. Boyd—*Cyb.* II.

The Galway station is on one of several banks of limestone drift, on which some of the Burren plants find a home.

Viola palustris L. Marsh Violet.

Divisions all, *except 8 Limerick and 19 Kildare*. No doubt universal. A plant of frequent but not common occurrence.

Viola odorata L. Sweet Violet.

Census 35—East 15, Centre 12, West 8.

1 Kerry S. *Camp '94: rare even as an escape—Scully.
2 Kerry N. *Tralee '90: rare even as an escape—Scully.
3 Cork W. *Castletownsend '97: rare—Phillips.
4 Cork Mid ‡Near Carrigrohane '98: rare—Phillips.
5 Cork E. ‡Ballyhooly '00: rare—Phillips.
6 Waterfd. †Dungarvan '99, †Clonmel '97– P. Tallow, c.—*Cyb.* II.
7 Tipp. S. Cashel '00—Phillips. Carrick-on-Suir '00—P. Rare.
8 Limrck. ‡Askeaton '00—P.
9 Clare Near Sixmilebridge '85–6—Stewart *863*.
10 Tipp. N. Youghal Bay '99—P. Frequent.
11 Kilkny. Near Lismaine House '99, Kilkenny '97—P.
12 Wexford Ballycarney, &c. (Miss Farmer)—More '72 *614*. Not rare.
13 Carlow Bagenalstown '99—P. Not rare.
14 Queen's Abbeyleix '00—Phillips. †Frequent—P.
15 Galw. SE. Portumna '00—Phillips.
17 Galw. NE. Cloonkeelway L. '99, †Clonbrock '96—P.
18 King's Clara '99: frequent throughout—P.
19 Kildare Carbury and Kilcullen '96—P. F., apparently native.
20 Wicklow Co. Wicklow "here and there"—*Cyb.* I.
21 Dublin †Near Tynan Castle '00: rare—Colgan.
22 Meath Beauparc '95: frequent in centre and west—P.
23 Westmth. N. of Moate '99—P. †Knock Drin—Levinge *484*.
24 Longfd. Killashee '00: frequent and probably native—P.
25 Roscomn. West of Athlone '99—P.
26 Mayo E. †Claremorris '00—P.
27 Mayo W. ‡Derreen '00—P.
30 Cavan Bracklagh '85—P. *692*. Farnham, Millbrook—*Fl. Ulst.*
31 Louth ‡Ballymascanlan '00—P.
33 Ferman. Rossory and Derrygore '99—Tetley.
34 Dongl. E. *Near Pettigoe established—*Fl. Don.*
36 Tyrone ‡Omagh '96—Miss Knowles.
37 Armagh †Near Armagh: north only, rare, '92—P.
38 Down Greyabbey '95—Miss Knowles. †Frequent—*Fl. NE.*
39 Antrim †Carrickfergus, &c.: frequent—*Fl. NE.*
40 L'derry *Lignapeiste, &c.: frequent—*Fl. NE.*

It is difficult to decide the proper standing of this plant in Ireland.

If not native it is at least thoroughly established and widespread in many parts of the country, especially in the Central Plain. Rarer in the west.

Viola hirta L. Hairy Violet.

Census 5—East 3, Centre 0, West 2.

8	Limrck.	Askeaton, Mullagh c. '00—P. Foynes—Stewart *863*.
9	Clare	Inishmore '95—P. Inisheer, c., '92, Colgan—*Cyb.* II.
12	Wexford	By Slaney below Clohamon '81—Hart *371*.
19	Kildare	Carton on limestone rocks '94—P.
21	Dublin	Phœnix Park '00—Colgan. Chiefly on coast, local.

Viola Riviniana Reichb. Wood Violet.

Divisions all. Abundant.

Viola Reichenbachiana Boreau.

Census 12—East 4, Centre 2, West 6.

1	Kerry S.	Glencar '00: frequent—Scully.
2	Kerry N.	Killarney '99: frequent—Scully.
12	Wexford	Near Ballyhack—B. & M. '92 *100*.
14	Queen's	Maryborough '00—Phillips. Emo '96—P.
15	Galw. SE.	Castle Taylor, More—*Cyb.* I.
16	Galw. W.	Ashford '95—M. & S. *545*.
20	Wicklow	Powerscourt, More—*Cyb.* I.
21	Dublin	Near Tymon '97: local—Colgan.
23	Westmth.	Knock Ross '95—Levinge *486*.
27	Mayo W.	Newport '99—Marshall.
35	Dongl. W.	Carrablagh, &c. '98—Hart *406*.
39	Antrim	Crumlin, Corry: rare—*Fl. NE.*

Distribution still quite imperfectly known: perhaps common in Ireland.

Viola canina L. Dog Violet.

Census 36—East 15, Centre 10, West 11.

1	Kerry S.	Derrynane '00: rather rare—Scully.
2	Kerry N.	Ballybunnion '99: rather frequent—Scully.
3	Cork W.	Inchigeela (type and *V. lactea*) '00—Phillips.

4	Cork Mid	St. Ann's Hill, R. Mills—Allin *Fl.* '83.
5	Cork E.	Templemichael glen '94—Phillips.
6	Waterfd.	Tramore '99—P.
9	Clare	Ballyvaughan (*V. lactea*) '99 (Playfair)—Phillips *674*.
10	Tipp. N.	Youghal Bay '99: frequent on Lough Derg—P.
11	Kilkny.	Johnstown '98—P.
12	Wexford	Rosslare '97—Marshall. Common on the coast.
13	Carlow	Gowlin '99, Carlow '98—P.
15	Galw. SE.	St. Cleran's '99, f. on L. Derg—P. Castle Taylor.
16	Galw. W.	Roundstone '98, Recess '94—P. F. on east margin.
17	Galw. NE.	Clonbrock '96, and f. on L. Corrib—P.
18	King's	Near Clonmacnoise '85–6—B. & V. *113*.
19	Kildare	Poulaphuca '00—P.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.
21	Dublin	Rush sandhills '00: local—Colgan.
22	Meath	Laytown and Mornington '96—P.
23	Westmth.	Coosan Lough '98—P.
24	Longfd.	Inchcleraun '97: frequent on Lough Ree—P.
25	Roscomn.	Galey on Lough Ree '97—P.
26	Mayo E.	Claremorris '00—P. Clonbur—Marshall. L. Carra.
27	Mayo W.	F. by Lough Conn '00—P. L. Cullin, More—*Cyb.* I.
28	Sligo	Mullaghmore '00: not rare in east half—P.
29	Leitrim	Carrick-on-Shannon '99—P.
30	Cavan	Lough Ramor '96—P.
31	Louth	Braganstown, Dromiskin, Queensborough, '96—P.
32	Monaghan	Castleblayney '96—P.
33	Ferman.	Garrison '00—P. F. on Lough Erne—Barrington *108*.
34	Dongl. E.	Clonmany, Strass R., '98—Hart *405*. Pettigoe—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	L. Neagh common, and L. Ross, '92—P.
38	Down	Lough Island Reavy ['90]—S. & P. *873*. Rare—*Fl. NE.*
39	Antrim	Cushendun '93—Shoolbred *837*. Rare—*Fl. NE.*
40	L'derry	Kilrea '94—Mrs. Leebody. Bann mouth '94—P.

Viola stagnina Kit.

Census 4—East 0, Centre 2, West 2.

9	Clare	Turlough and L. Callagh '95, O'Kelly—*Cyb.* II.
15	Galw. SE.	Near Athenry! '99—Mrs. Joyce. Frequent about Gort.
24	Longfd.	By Shannon below Drumsna '00—P.
26	Mayo E.	Clonbur '95—Marshall.

Viola tricolor L. Wild Pansy.

Census 32—East 13, Centre 10, West 9.

1	Kerry S.	Cummeenacappul '81—Hart *373*.
2	Kerry N.	‡Killarney '90—Scully.
3	Cork W.	Baltimore '97 : rare—Phillips.
4	Cork Mid	Coachford '97 : rare—Phillips.
5	Cork E.	Little Island '94 : rare—Phillips.
8	Limrck.	Lough Gur '97, G. Fogerty—Hb. L.F.C. !
12	Wexford	‡Killoughrim—Moffat '89 *552*.
13	Carlow	Borris '00—T. Hartley !
16	Galw. W.	Near Barna '00—Mrs. Joyce ! And in east, rare.
18	King's	Parsonstown, M. Dowd—More '72 *614*.
19	Kildare	Hills north of Kildare '98—P.
20	Wicklow	Woodenbridge '99 : frequent—P.
21	Dublin	Piperstown '97 : rare—Colgan.
22	Meath	Laytown '95—P.
23	Westmth.	Lisclogher, Miss Levinge—Levinge '94 *484*.
24	Longfd.	Cloonee '98—P.
25	Roscomn.	Arigna '00—P.
26	Mayo E.	Ballymore Lough '00—P.
27	Mayo W.	Lough Conn '00—P. Mallaranny '99—Marshall.
28	Sligo	Ballysadare '00—P. Lough Talt '96—Colgan.
29	Leitrim	Garadice L. '00—P. Drumod—Somerville. L. Allen.
30	Cavan	Ballyconnell '00—Somerville. L. Ramor; Mt. Nugent.
31	Louth	Ravensdale '00—P.
32	Monaghn.	Rossmore '00—Waddell. Frequent.
33	Ferman.	Gubbaroe Point on Lr. L. Erne '81-2—Barrington *108*.
34	Dongl. E.	By the Erne—Hart '00.
35	Dongl. W.	Fanet '98—Hart *406*. Gweebarra—Hart.
36	Tyrone	Omagh '96 : common—Miss Knowles.
37	Armagh	Lough Gilly '99—Druce *285*. Common '92—P.
38	Down	Holywood '99—P. Common—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Common—*Fl. NE.*
40	L'derry	Bellarena '98—Mrs. Leebody. Common—*Fl. NE.*

Probably in all divisions, but appears to be common in the north only. Not always separated from *V. arvensis*, and in consequence some recorded stations cannot be used. Apparently rare on the limestone.

Viola arvensis Murr.

Divisions all *except 29 Leitrim and 34–35 Donegal.* No doubt universal. A common plant in many districts.

Viola Curtisii Forst.

Census 20—East 10, Centre 1, West 9.

1	Kerry S.	Derrynane '00: locally abundant—Scully.
2	Kerry N.	Ballybunnion '99: locally abundant—Scully.
3	Cork W.	Near Skibbereen '97: frequent in south—Phillips.
4	Cork Mid	Kinsale—Drummond '20 *287* (probably this—Phillips.)
5	Cork E.	Youghal '00, Ballycroneen '98—Phillips.
6	Waterfd.	Tramore '99—Phillips. Frequent?
9	Clare	Malbay '00, G. Fogerty! Coasts and islands frequent.
12	Wexford	Rosslare '97—Marshall. Coast common.
16	Galw. W.	Roundstone '96—P.
20	Wicklow	Greystones and Arklow '94—P.
21	Dublin	Rush sandhills '00: local—Colgan.
22	Meath	Gormanstown '95—P.
27	Mayo W.	Killala '00—P.
28	Sligo	Mullaghmore '00, Strandhill '97—P.
33	Ferman.	Lough Erne at Lisnaskea '81–2—Barrington *108*.
34	Dongl. E.	Clonmany '98—Hart *405*. In the north and south.
35	Dongl. W.	Kincashla &c.: throughout, local—*Fl. Don.*
38	Down	Castlewellan L. ['90]—S. & P. *873*. Sandy shores c.
39	Antrim	L. Neagh near Antrim '86—P. Sandy coasts common.
40	L'derry	Castlerock '85—P.

Occasionally on lake-shores in the north (33, 38, 39). Common on sandy coasts.

Viola lutea Huds. Mountain Pansy.

Census 5+(1)—East 3, Centre (1), West 2.

3	Cork W.	Bantry '52, Sullivan—*Cyb.* II. Castletown—Power *Fl.*
9	Clare	Lehinch '92, Levinge—*Cyb.* II. Frequent in NW.
19	Kildare	Poulaphuca '00—P. Dunmurry Hill '77—Butler *185*.
20	Wicklow	King's River near Lackan (Dunlop)—More '72 *614*.
21	Dublin	Near Brittas '97—Colgan. South only, very rare.
(30	Cavan?	Nr. Bailieborough (Annot. in Thelkeld)—More '72 *614*.)

Polygala vulgaris L. Milkwort (genus).

Census 37—East 15, Centre 11, West 11.

1	Kerry S.	Kenmare '00 : frequent—Scully.
2	Kerry N.	Killarney '99 : frequent—Scully.
3	Cork W.	Dunmanway '00 : common—Phillips.
4	Cork Mid.	Donoughmore '96 : common—Phillips.
5	Cork E.	Whitegate '00 : common—Phillips.
6	Waterfd.	Cappagh '99—P.
7	Tipp. S.	Cahir '00 : common—P.
9	Clare	Ballyvaughan '95—Colgan.
10	Tipp. N.	Cloughjordan '00 and (near *calcarea*) Devil's Bit—P.
11	Kilkny.	Thomastown '98, Ballyragget '99—P.
12	Wexford	Macmine '97—Marshall. Frequent.
13	Carlow	Tullow '99—P.
14	Queen's	Mountrath '97, Maryborough '96—P.
15	Galw. SE.	Chevy Chase '00—P. Portumna '96—Colgan.
16	Galw. W.	Inveran '95—Colgan. Frequent (type and *oxyptera*).
17	Galw. NE.	Knockmae '00 : frequent—P.
18	King's	Clonmacnoise '99—P.
19	Kildare	Above Rathmore '98 : common—P.
20	Wicklow	Shillelagh '99, Rathdrum '94—P.
21	Dublin	Howth '00 : common—Colgan.
22	Meath	Kildalkey and Ballivor '00—P.
23	Westmth.	Mullingar '97—Carr. Coosan Lough '98—P.
24	Longfd.	Longford '98, near Drumsna '00—P.
25	Roscomn.	Rockville '99, Athlone, Mount Talbot—P.
26	Mayo E.	Claremorris '00—P. Clonbur (*oxyptera*)—Marshall.
27	Mayo W.	Mallaranny '99—Marshall. Frequent.
28	Sligo	Ballysadare '00, Carrowkee—P. Skreen—Colgan.
30	Cavan	Cavan '96, Drumhawnagh '00—P.
31	Louth	Termonfeckin '96—P.
33	Ferman.	Lower Lough Erne common '92—P.
34	Dongl. E.	Frequent throughout—*Fl. Don.*
35	Dongl. W.	Frequent throughout—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles. Knockavoe—Sigerson *838*.
37	Armagh	Frequent throughout '92—P.
38	Down	Holywood '93—P. ? Common.
39	Antrim	Clinty Hill '99—Miss Knowles. Common.
40	L'derry.	Magilligan '97; Kilrea '96 (near *calcarea*)—Mrs. Leebody.

Polygala serpyllacea Weihe.

Census 38—East 13, Centre 13, West 12.

1	Kerry S.	Kenmare '99—Scully. Common.
2	Kerry N.	Abbeydorney '99: frequent—Scully.
3	Cork W.	Millstreet '00: frequent—Phillips.
4	Cork Mid	Donoughmore '96: frequent—Phillips.
5	Cork E.	Near Templemichael '94: frequent—Phillips.
7	Tipp. S.	Galtees '80—Hart *372*.
8	Limrck.	Curragh Chase '00—Somerville.
9	Clare	Slieve Elva '96 (P. B. O'Kelly)—Colgan.
10	Tipp., N.	Lough Ourna, Nenagh, Keeper Hill, '99—P.
11	Kilkny.	Near Jenkinson House '99—P.
12	Wexford	Wexford '97—Marshall. Frequent.
13	Carlow	Aghade '99, Bagenalstown '97—P.
14	Queen's	Mountrath '97, Maryborough '96—P.
15	Galw. SE.	Woodford River '96—Colgan. Cartron '82—Mrs. Joyce!
16	Galw. W.	Glen Inagh '98—Colgan. And in Inishbofin and NE.
17	Galw. NE.	Clonbrock '96—P.
18	King's	Kinnitty '00, Banagher '98—P.
20	Wicklow	"2050 feet in Wicklow," Colgan—*Cyb.* II.
21	Dublin	Howth '00: common—Colgan.
22	Meath	Kildalkey and Slieve Bregh '00—P.
23	Westmth.	Lough Deravaragh—Levinge '94 *484*.
24	Longfd.	Lough Gowna '00—P.
25	Roscomn.	Corkip Lough '99—P. L. Ree '85–6—B. & V. *113*.
26	Mayo E.	East of Foxford '00—P. Clonbur '95—M. & S. *545*.
27	Mayo W.	Mallaranny '99—Marshall. Common.
28	Sligo	Knockacree '96—Colgan.
29	Leitrim	Annaghearly Lough '99—P.
30	Cavan	Slieve Rushen '00—Somerville. L. Gowna '00—P.
31	Lough	Termonfeckin '96—P.
32	Monaghn.	Bessmount '00—Waddell. Frequent.
33	Ferman.	SW. of Belleek '00—P. L. Erne f.—Barrington *108*.
34	Donegl. E.	Frequent throughout—*Fl. Don.*
35	Donegl. W.	Frequent throughout—*Fl. Don.*
36	Tyrone	Mullaghcarn '96—Miss Knowles. Knockavoe—*838*
37	Armagh	Frequent throughout '92—P.
38	Down	Ballygowan '92—P. Frequent—*Fl. NE.*

39 Antrim Slemish '00—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Toome, Stewart—*Fl. NE.*

The above records show that this plant and the last are evidently spread over the whole country.

***Saponaria officinalis** L. Soapwort.

Census 28—East 12, Centre 10, West 6.

Divisions all, *except 15, 16, 17, 19, 22, 25, 26, 27, 29, 31, 32, 35.* Commoner in the east than the west, no doubt on account of the greater cultivation of the eastern counties. In all cases has had a garden origin, which may, however, be of great antiquity, as the plant was used in early times as a substitute for soap.

Silene Cucubalus Wibel. Bladder Campion.

Divisions all, *except 29 Leitrim.* Generally frequent.

Silene maritima With. Sea Campion.

Census 25—East 11, Centre 2, West 12.

Maritime and sub-maritime divisions, namely—1, 2, 3, 4, 5, 6, 8, 9, 12, 15, 16, 17, 20, 21, 22, 27, 28, 29, 31, 34, 35, 36, 38, 39, 40; common round the whole coast. Inland in the following:—

1 Kerry S. Above Gap of Dunloe at 1400 feet '81—Hart *373*.
2 Kerry N. Killarney lakes '00—Scully.
16 Galw. W. Derryclare Mtn. '99—Colgan. F. on the mountains.
27 Mayo W. Birreencorragh, Nephin, '82—Hart *380*. Croaghpatrick.
28 Sligo Ben Bulben range common '84—B. & V. *112*.
29 Leitrim Glenade cliffs '99—P.
35 Dongl. W. Lavagh More—*Fl. Don.* Errigal—*Fl. Ulst.*
38 Down Conlig Hill abundant '00—P. Streams in Mournes for 2 miles from sea—S. & P. *873*.
39 Antrim Cave Hill, and the entire basaltic range—*Fl. NE.*
40 L'derry Benevenagh top '92—P. Abundant on the basaltic range (D. Moore)—More *614*.

The inland stations all lie near the coast (as do most of the Irish mountains), and it will be noticed that the "Centre" is not represented in the above list. The Killarney station is only 70 feet above sea-level Conlig Hill 300 to 400 feet.

†Silene anglica L. English Catchfly.

Census 15—East 8, Centre 1, West 6.

1 Kerry S. Caragh Lake '96: rare and local—Scully.
2 Kerry N. ‡Killorglin '90—Scully.
3 Cork W. Schull '96: frequent in south—Phillips.
5 Cork E. Whitegate '95—Phillips. Little Island—Power *Fl.*
12 Wexford Tinnyberna '81—Hart *371*. Rare.
13 Carlow Near Carlow, J. Morrison—*Cyb.* I.
16 Galw. W. Two miles west of Oughterard '38—Mackay *332*.
21 Dublin ‡Baldoyle '00: rare—Colgan.
31 Louth Greenore, '00—P. Castlebellingham—Butler *185*
34 Dongl. E. ‡About Greencastle—*Fl. Don.*
35 Dongl. W. ‡Gweebarra estuary—*Fl. Don.*
36 Tyrone Coalisland '96—Miss Knowles.
38 Down Hilltown ['90]—S. & P. *873*. S. only, locally abundant.
39 Antrim Near Bellaghy, R. Tate—*Fl. NE.*
40 L'derry Bellarena '98, Magilligan '93—Mrs. Leebody.

Silene acaulis L. Cushion Pink.

Census 4—East 1, Centre 0, West 3.

28 Sligo Ben Bulben '00—West. C. on Ben Bulben range.
29 Leitrim Glenade '99—P. ? Frequent on Ben Bulben range.
34 Dongl. E. Dunaff Head '98—Hart *405*.
40 L'derry Benevenagh '93—Shoolbred *637*.

Ben Bulben range, with an outlying station in N. Donegal, and one in N. Derry.

‡Silene noctiflora L. Night-flowering Catchfly.

Census 8+(1)—East 6+(1), Centre 1, West 1.

2 Kerry N. ‡Ballybunnion '99—Scully.
18 King's Tullamore '38 (Miss Green)—Mackay *526*.
(21 Dublin *Dundrum—Mrs. Tatlow *880*).
22 Meath Mayden Tower, common in one field, '96—P.
31 Louth Greenore '00—P. Castlebellingham '90—Butler *185*.
37 Armagh Near Armagh '92—P.
38 Down Rough I. '65—Stewart. Very rare, not permanent.
39 Antrim Larne harbour f. '97—P. Lisburn, D. Moore—*Cyb. I.*
40 L'derry Magilligan, *Hb.* D. Moore—*Cyb. II.*

Chiefly in sandy fields on the east coast; probably in all cases introduced with crops.

†Lychnis vespertina Sibth. White Campion.

Census 25+(1)—East 14, Centre 6, West 5+(1).

1	Kerry S.	‡Railway at Caragh '00—Scully.
2	Kerry N.	‡Killarney '94—Scully.
3	Cork W.	Skibbereen '96: rare—Phillips.
4	Cork Mid	Ballincollig '98: frequent—Phillips.
5	Cork E.	Youghal '00: frequent—Phillips.
6	Waterfd.	Dungarvan '99—P.
10	Tipp. N.	‡Nenagh '99—P.
11	Kilkny.	Kilkenny '97—P.
12	Wexford	Wexford '96—Marshall. Frequent in the south.
13	Carlow	Bagenalstown '99, Carlow '98, ‡elsewhere—P.
14	Queen's	Maryborough '00: frequent—P.
(16	Galw. W.	Ashford, casual, Miss Jackson—*Cyb.* II.).
18	King's	‡Clonmacnoise '99, Tullamore—P. Mountmellick.
19	Kildare	†Nurney '97, †Carbury '96—P.
20	Wicklow	Kilmacanoge '94—P.
21	Dublin	Skerries '00: local—Colgan.
22	Meath	Mornington '96, Gormanstown, †Enfield—P.
25	Roscomn.	Yew Point and Hudson's Bay '85-6—B. & V. *113*.
26	Mayo E.	Ballinrobe '94—Mrs. Persse!
31	Louth	Louth and Braganstown '96, and f. on coast—P.
34	Dongl. E.	†Buncrana and Ballyshannon—*Fl. Don.*
35	Dongl. W.	†Fanet, Fintragh, &c.: rare—*Fl. Don.*
36	Tyrone	Coalisland '96: rare—Miss Knowles.
38	Down	Dundrum '99—B.N.F.C. *139*. Rare—*Fl. NE.*
39	Antrim	Magheramorne '93—P. Rare—*Fl. NE.*
40	L'derry	Castledawson '71—Stewart.

Commoner in the east than in the west, like most plants which favour light soils.

Lychnis diurna Sibth. Red Campion.

Census 32—East 13, Centre 7, West 12.

1	Kerry S.	Derrynane '00—Scully.
2	Kerry N.	Killarney '99: rare and local—Scully.
3	Cork W.	Cape Clear Island '96: frequent in south—Phillips.
4	Cork Mid	Blarney—Allin *Fl.* '83. Carrigaline—Power *Fl.*
5	Cork E.	Near Fermoy (Chandlee): rare—Allin *Fl.* '83.

6	Waterfd.	Comeraghs '82–3—Hart *381*.
7	Tipp. S.	Muskry River in the Galtees '00—P.
9	Clare	Lisdoonvarna '00—Miss Knowles.
12	Wexford	Courtown '96—P.
13	Carlow	Ballintemple and Aghade '99—P.
15	Galw. SE.	Dunsandle '85—Mrs. Joyce!
16	Galw. W.	Ross Hill on L. Mask, Miss Jackson—*Cyb.* II.
17	Galw. NE.	Clonbrock '96—P.
19	Kildare	Kilcullen '96, Poulaphuca '00—P.
20	Wicklow	Avondale and Shillelagh '99—P. Frequent.
21	Dublin	Lambay Island '96—P. Rare—Colgan.
23	Westmth.	Knock Drin abundant—Levinge '94 *484*.
25	Roscomn.	Lough Key '97—P.
27	Mayo W.	Inishturk '75—More *616*.
28	Sligo	Ben Bulben '00—West & Tetley. Lough Arrow '97—P.
29	Leitrim	Near Annaghearly Lough '99—P.
30	Cavan	Ballyconnell '00—Somerville.
31	Louth	Ballymascanlan '00—P.
32	Monaghn.	Castleshane '00—Waddell. Castleblayney '96—P.
33	Ferman.	Enniskillen '99—P. Frequent.
34	Dongl. E.	Moville, Ballyshannon, &c.: local—*Fl. Don.*
35	Dongl. W.	Fanet, &c.: throughout, local—*Fl. Don.*
36	Tyrone	Omagh '96: rare—Miss Knowles.
37	Armagh	Tanderagee '92—P. And on L. Neagh shores.
38	Down	Rockport '00—P. Frequent, local.
39	Antrim	Murlough Bay! '00—Mrs. Swan. Frequent—*Fl. NE.*
40	L'derry	Bellarena '97—Mrs. Leebody. Frequent—*Fl. NE.*

Lychnis Flos-cuculi L. Ragged Robin.

Divisions all. Common.

‡Lychnis Githago Scop. Corn-cockle.

Census 28—East 15, Centre 4, West 9.

1	Kerry S.	*Kilgobnet '99—Scully. *Blaskets—Barrington *107*.
2	Kerry N.	*Near Ballymalis '92—Scully.
3	Cork W.	Skibbereen '97: frequent in south—Phillips.
4	Cork Mid	Ballincollig '98: frequent—Phillips.
5	Cork E.	Ballyvodock '00: frequent—Phillips.
6	Waterfd.	Ballyernan and Ardmore '82—Hart *384*.

9	Clare	Lisdoonvarna '00—Miss Knowles. Frequent in Burren.
10	Tipp. N.	Near Nenagh '00—Phillips.
11	Kilkny.	‡Granny '98—P.
12	Wexford	Courtown '94—Mrs. Tatlow! Frequent.
13	Carlow	Slaney below Ballintemple '81—Hart *371*.
15	Galw. SE.	Garryland '00—P.
16	Galw. W.	Ross, Oughterard, &c.'99—P. Frequent on E. margin.
19	Kildare	Hills north of Kildare '98—P.
20	Wicklow	Dunbur, D'Arcy—*Cyb.* II.
21	Dublin	Portrane '00: rare—Colgan.
22	Meath	Mornington '93—P. *710*.
23	Westmth.	Knock Drin, rare, Levinge—*Cyb.* II.
26	Mayo E.	Ballinrobe '90—Mrs. Persse!
28	Sligo	Ballysadare and Strandhill '97—P.
31	Louth	Greenore '00—P.
34	Dongl. E.	Effishmore River '98—Hart *405*. ‡Rare—*Fl. Don.*
35	Dongl. W.	‡Fanet, Killybegs, &c.: rare—*Fl. Don.*
36	Tyrone	Lough Neagh '96: rare—Miss Knowles.
37	Armagh	Frequent throughout '92—P.
38	Down	Killinchy '90—P. †Frequent—*Fl. NE.*
39	Antrim	Craigs '99—Miss Knowles. †Frequent—*Fl. NE.*
40	L'derry.	Bellarena '98—Mrs. Leebody. †Frequent—*Fl. NE.*

In crops, especially on light soils near the coast.

Cerastium tetrandrum Curtis.

Census 30—East 13, Centre 5, West 12.

1	Kerry S.	Kenmare '99—Scully. Frequent on coast and islands.
2	Kerry N.	Ballybunnion '99; frequent—Scully.
3	Cork W.	Castlefreke '00: frequent by the sea—Phillips.
4	Cork Mid	Crosshaven '00: frequent—Phillips.
5	Cork E.	Youghal '00: common near the sea—Phillips.
6	Waterfd.	Dungarvan '99—P. Common on the coast.
8	Limrck.	Limerick '99—Somerville.
9	Clare	Inishmore '95—P. Kilrush '85-6—Stewart *863*.
10	Tipp. N.	†Portumna '97—P.
12	Wexford	Wexford '96—Marshall. Coast, frequent.
15	Galw. SE.	Rinville '99—P.
16	Galw. W.	S. of L. Mask '96—Marshall *537*. Inishbofin—More *616*.
17	Galw. NE.	Barbersfort and Oranmore '99—P.
18	King's	North of Banagher '98—P.
19	Kildare	Curragh '97—P.

20	Wicklow	Greystones '94—P. ? Frequent on coast.
21	Dublin	Rush sandhills '00: local—Colgan.
22	Meath	Mornington '96—P.
25	Roscomn.	†Frequent on railways in the south '97–9—P.
26	Mayo E.	S. of L. Mask '96—Marshall. Ballinrobe; Hollymount.
27	Mayo W.	Common round L. Conn '00—P. Frequent on coast.
28	Sligo	Ballysadare '00—P. Coast, frequent.
29	Leitrim	Tullaghan on ruins '99—P.
31	Louth	Dunleer '00, and coast at Termonfeckin '96—P.
34	Dongl. E.	Bundoran '00—Tetley. In the north—*Fl. Don.*
35	Dongl. W.	Aranmore, &c.: frequent on coast—*Fl. Don.*
37	Armagh	‡Railway at Wellington cutting '92—P.
38	Down	Giant's Ring, C. Dickson: coast frequent—*Fl. NE.*
39	Antrim	Lough Neagh f.—Stewart. Coast frequent—*Fl. NE.*
40	L'derry	Benbradagh '94—Mrs. Leebody. Coast f.—*Fl. NE.*

All round the coast. Rare inland, on lake-shores (27, 39), mountains (40), sandy or boggy ground (10, 16, 17, 18, 19, 26, 38), old walls (29, 31) or railway tracks (25, 37).

Cerastium semidecandrum L.

Census 17—East 9, Centre 1, West 7.

1	Kerry S.	Waterville '00: rather rare—Scully.
2	Kerry N.	Ballyheige '88: local—Scully.
3	Cork W.	Near Kilbrittain (Alexander)—Power *Fl.* '45.
4	Cork Mid	Friar's Walk at Cork—Drummond '19 *287*.
5	Cork E.	Youghal and mouth of Fannisk R. '73—Allin *16*.
6	Waterfd.	Dungarvan '99—P.
9	Clare	Fanore '00—Miss Knowles.
12	Wexford	Rosslare '97—Marshall *539*. Frequent on SE. coast.
20	Wicklow	Common on the sand-hills, D. Moore—*Cyb.* I.
21	Dublin	Rush sand-hills '00: local—Colgan.
25	Roscomn.	‡On railway at Mote Park '97—P.
27	Mayo W.	Mallaranny '99—Marshall.
34	Dongl. E.	Malin Head, &c.: north coast only—*Fl. Don.*
35	Dongl. W.	Kincashla, &c.: coast, local—*Fl. Don.*
38	Down	Newcastle '98—Davies. On the coast, rare.
39	Antrim	Ballycastle '82—Stewart.
40	L'derry	Benevenagh '82—Hart *381*. Coast, rare—*Fl. NE.*

Sand-hills on the coast, except for the doubtful Roscommon station and Mr. Hart's record from summit of Benevenagh, Co. Derry, 1100 feet.

Cerastium glomeratum Thuill. Mouse-ear.

Divisions all. Common.

Cerastium triviale Link. Mouse-ear.

Divisions all. Very common.

Cerastium arvense L.

Census 10—East 5, Centre 0, West 5.

1	Kerry S.	Blaskets common '80—Barrington *107*.
5	Cork E.	Ballyvodock '43—Power *Fl.*
9	Clare	Black Head '99—Miss Knowles. Burren and Aran c.
15	Galw. SE.	Abundant on the coast '99—P.
16	Galw. W.	Inveran '97, W. Colgan—*Cyb.* II. Galway, c.—P.
17	Galw. NE.	Oranmore to Galway common '99—P.
20	Wicklow	Greystones—*Guide* '78.
21	Dublin	Skerries '00—Colgan. Frequent on coast.
22	Meath	Mornington '96—P.
39	Antrim	By L. Neagh at Massereene Park '93—P.

Extremely local. The plant is actually confined to a few colonies on the coast:—a large one in Galway Bay (9, 15, 16, 17), a smaller one on the east coast (20, 21, 22), and outlying ones in Kerry, Cork, and Antrim—the last-named being inland.

Stellaria media Vill. Chickweed.

Divisions all. Abundant.

Stellaria Holostea L. Greater Stitchwort.

Divisions all, *except 27 Mayo W.* No doubt universal. Frequent.

Stellaria palustris Retz.

Census 19+(1)—East 5+(1) Centre 9, West 5.

10	Tipp. N.	Youghal Bay '99, Portumna '97—P.
11	Kilkny.	R. Barrow near Borris '84—Hart *383*.
13	Carlow	Polmounty R. '98—P. Milford—Hart *383*, &c.
14	Queen's	Barrow below Athy and at Knockbeg '84—Hart *383*.
15	Galw. SE.	Portumna '98—P.
16	Galw. W.	Clonbur '95—M. & S. *545*.
17	Galw. NE.	Tuam and Castlegrove '99—P.

18	King's	Banagher '98—P. Near Portarlington '84—Hart *383*.
19	Kildare	Monasterevan '99—P. Athy; Rathangan.
(21	Dublin	Extinct at Curragha bog?—*Cyb.* II).
22	Meath	Boyne at Bective '96—P.
23	Westmth.	L. Iron '99—P. L. Ree, Owel, Ennel—Levinge *484*.
24	Longfd.	Ballymahon and Lough Forbes '00—P.
25	Roscomn.	Kiltoom, Lanesboro', '85-6—B. & V. *113*. Knockview.
26	Mayo E.	Hollymount '54—Moore *600*.
28	Sligo	River at Ballysadare '00—P.
29	Leitrim	Rinn Lough '99—P.
30	Cavan	Tomkin Road '00—Somerville. Ballyhaise—*Cyb.* II.
31	Louth	Kerney's Cross '97—P. Glack bog—Butler *185*. Rare.
33	Ferman.	Tully Devenish '00—West. L. Erne f.—Barrington *108*.

Chiefly in the centre, with many stations in the basins of the Shannon, Barrow, and Erne.

Stellaria graminea L. Lesser Stitchwort.

Divisions all. Frequent.

Stellaria uliginosa Murr.

Divisions all. Common.

Arenaria verna L.

9	Clare	Kilfenora '00—Miss Knowles. Burren and Aran c.
39	Antrim	Glenariff '93—Shoolbred *837*. Frequent—*Fl. NE.*
40	L'derry	Benevenagh '93—Shoolbred *837*. Rare—*Fl. NE.*

***Arenaria tenuifolia** L.

Census 15—East 5, Centre 7, West 3.

7	Tipp. S.	Bansha '00—Phillips.
8	Limrck.	Killonan '00—P.
10	Tipp. N.	Roscrea '00—Phillips. Cloughjordan, Portumna—P.
13	Carlow	Milford '98—P.
14	Queen's	Ballybrophy '00—Phillips.
15	Galw. SE.	Loughrea and Ardrahan '00—Phillips.
16	Galw. W.	Oughterard '99—P.
17	Galw. NE.	Attymon '00—Phillips. Woodlawn '99—P.

18	King's	Clara '00—Phillips. Banagher '98—P.
19	Kildare	Curragh gravel-pit '97, Celbridge '00—P.
20	Wicklow	Glenealy '99—P.
21	Dublin	Celbridge '00—P.
22	Meath	Drumree '00—P.
23	Westmth.	Moate and Athlone '99—P.
25	Roscomn.	Athlone, and for some miles W. and N. '99—P.

A remarkable railway colonist, first observed in Ireland in 1897, and now known to extend over the greater portion of the Central Plain, on railway tracks only. In Britain it has an "English" distribution, occurring chiefly in the SE., and being absent from Scotland and very rare in Wales.

Arenaria trinervia L.

Census 37—East 15, Centre 12, West 10.

1	Kerry S.	Kenmare '99 : rather rare and local—Scully.
2	Kerry N.	Killarney '00 : local—Scully.
3	Cork W.	Skibbereen '97 : frequent—Phillips.
4	Cork Mid	Ballinhassig '98 : frequent—Phillips.
5	Cork E.	Castletownroche '00 : frequent—Phillips.
6	Waterfd.	Lismore and Cappoquin '99—P.
7	Tipp. S.	Cahir '00, Fethard, Kilsheelan, Vale of Aherlow—P.
9	Clare	Castle Lake '98—Hb. L.F.C.! Killaloe '96—Colgan.
10	Tipp. N.	Silvermines '99—P. Frequent throughout.
11	Kilkny.	Thomastown '00—Phillips.
12	Wexford	Alderton, Miss Glascott—B. & G. '89 *100*.
13	Carlow	Borris and Milford '98—P.
14	Queen's	Maryborough '00—Phillips. Camross and Graigue—P.
15	Galw. SE.	Marble Hill '98—P.
17	Galw. NE.	Cloonkeelway L. '99, Clonbrock '96—P.
18	King's	Kinnitty abundant '00, Frankford, Geashill—P.
19	Kildare	Carbury '96, Maynooth '94—P.
20	Wicklow	Shillelagh '99—P. Frequent in the NE.
21	Dublin	Near Athgoe '97 : local—Colgan.
22	Meath	Navan and Hill of Down '00—P.
23	Westmth.	Knock Drin '99—P. Chiefly in the centre, frequent.
24	Longfd.	Castlerea '00, Longford, Moydow—P.
25	Roscomn.	Boyle '97—P. St. John's Wood '85–6—B. & V. *113*.
26	Mayo E.	Claremorris '00—P.
27	Mayo W.	Castlemacgarrett, Brown *Fascic.* 1788—*Cyb.* II.

28	Sligo	Rosses Point '97—P. Frequent in eastern half.
29	Leitrim	Annaghearly L. '99—P. Glenade Mtn.—Murphy *629*.
30	Cavan	Ballyconnell '00—Somerville. Cavan '96—P.
31	Louth	Ballymascanlan '00, Killencoole '96—P.
33	Ferman.	Castle Coole '00—West & Tetley. Frequent.
34	Dongl. E.	Camlin &c.: in north and south, very rare—*Fl. Don.*
35	Dongl. W	Greenfort in Fanet '00—Hart.
36	Tyrone	Dungannon '96—Miss Knowles. Strabane '75—Stewart.
37	Armagh	Crowhill, &c. : rare, '92—P.
38	Down	Tollymore Park '00—P. Rare—*Fl. NE.*
39	Antrim	Whitepark Bay '00—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Limavady '95—B.N.F.C. *130*. Rare—*Fl. NE.*

Distributed thinly but evenly over the whole country. Probably occurs in all divisions, and is common in none.

Arenaria serpyllifolia L.

Divisions all, *except 36 Tyrone*. Local in many of the divisions, and rather calcicole.

Arenaria ciliata L.

28	Sligo	Seefin '00—Tetley. Ben Bulben range, local.

Arenaria peploides L. Sea Purslane.

All maritime divisions, namely—1, 2, 3, 4, 5, 6, 8, 9, 12, 15, 16, 17, 20, 21, 22, 27, 28, 29, 31, 34, 35, 38, 39, 40. Common on sandy and gravelly coasts.

Sagina apetala L.

Divisions all. Frequent.

Sagina maritima Don.

Census 21—East 12, Centre 0, West 9.

1	Kerry S.	Kenmare '99—Scully. Coast and islands frequent.
2	Kerry N.	Ballybunnion '99 : frequent—Scully.
3	Cork W.	Baltimore '97 : frequent—Phillips.
4	Cork Mid	Crosshaven '00 : frequent—Phillips.
5	Cork E.	Whitegate '00 : frequent—Phillips.
6	Waterfd.	Dungarvan '99—P. Frequent—Hart *384*.
9	Clare	Kilrush '85–6—Stewart *863*. Frequent.

12	Wexford	Wexford '96—Marshall. Frequent.
17	Galw. NE.	Rinmore '00—Phillips.
20	Wicklow	Wicklow '97—P. Common.
21	Dublin	North Bull '00 : frequent—Colgan.
22	Meath	Laytown '96—P.
27	Mayo W.	Mallaranny '99—Marshall.
28	Sligo	Inishmurry '96—P. *745*.
31	Louth	Greenore '00, Dromiskin, Blackrock—P.
34	Dongl. E.	Greencastle, Bell's Island, &c. : frequent—*Fl. Don.*
35	Dongl. W.	Sessiagh Bay '98—Hart *405*. Frequent—*Fl. Don.*
37	Armagh	Newry River '92—P.
38	Down	Mahee Island '90—P. Frequent—*Fl. NE.*
39	Antrim	Portrush '99—Druce. Frequent—*Fl. NE.*
40	L'derry	Magilligan '97—Mrs. Leebody. Frequent—*Fl. NE.*

Sea coast only. Perhaps in all maritime divisions.

Sagina ciliata Fries.

Census 9—East 6, Centre 0, West 3.

1	Kerry S.	Waterville '00 : rare—Scully.
2	Kerry N.	Near Ardfert '92 : rather rare—Scully.
9	Clare	Near Moerne Head, D. Moore—*Cyb.* I.
12	Wexford	Rosslare '97—Marshall *539*.
13	Carlow	Milford bridge '84—Hart *383*.
20	Wicklow	Arklow and Wicklow—More '72 *614*.
21	Dublin	Howth '00 : rare ?—Colgan.
38	Down	Newcastle ['90]—S. & P. *873*.
39	Antrim	Ballycastle '82—Stewart.

Has not always been distinguished, and is perhaps frequent. Apparently almost confined to the coast.

Sagina procumbens L. Pearlwort.

Divisions all. Common.

Sagina subulata Presl.

Census 8—East 2, Centre 0, West 6.

1	Kerry S.	Brandon '94 : rare and local—Scully.
3	Cork W.	Knockaphuca '96 : west, very rare—Phillips.
9	Clare	Moher '92, Levinge—*Cyb.* II. Inishmore—Wright *920*.

16 Galw. W. Maumeen '82—Hart *380*. Rare and local.
34 Dongl. E. Dunaff and Malin Heads—*Fl. Don.*
35 Dongl. W. Barra River, &c.: south only—*Fl. Don.*
39 Antrim Fair Head '97—P. Rare—*Fl. NE.*
40 L'derry Near Portstewart '35, D. Moore—*Cyb.* II.

Sagina nodosa Fenzl. Knotted Spurrey.

Divisions all, *except 36 Tyrone*. No doubt occurs in all divisions, but is not a common plant in any.

Spergula arvensis L. Corn Spurrey.

Divisions all. Very irregularly distributed, owing to its being distinctly calcifuge, and consequently local and often rare in the Central Plain divisions.

Spergularia rubra Presl. Sand Spurrey.

Census 9—East 7, Centre 1, West 1.

3 Cork W. Skibbereen '96 (Scully), Schull, Ballineen—Phillips.
4 Cork Mid Marina '96 and Custom House at Cork—Phillips.
5 Cork E. Kilcoleman—Allin *Fl.* '83.
12 Wexford Vinegar Hill '98—P. Carnsore—Marshall. F. in SE.
14 Queen's Barrow above Tinnehinch Bridge, Hart—*Cyb. II.*
37 Armagh Portadown, Newry, and Narrowwater, '92—P.
38 Down Lough Island Reavy ['90]—S. & P. *873*.
39 Antrim Dunluce '98—Druce. Lough Beg, Stewart—*Fl. NE.*
40 L'derry Toome '67—Stewart. Draperstown, D. Moore—*Fl. NE.*

Very rare and local.

Spergularia media Presl.

Maritime and sub-maritime divisions all, namely 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16, 17, 20, 21, 22, 27, 28, 29, 31, 34, 35, 37, 38, 39, 40.

Spergularia salina Presl.

Maritime and sub-maritime divisions all, *except 37 Armagh*: namely 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16, 17, 20, 21, 22, 27, 28, 29, 31, 34, 35, 38, 39, 40.

Spergularia rupestris Lebel.

Census 19—East 10, Centre 1, West 8.

1	Kerry S.	Ballinskelligs '92 : frequent—Scully.
2	Kerry N.	Ballybunnion '99 : frequent—Scully.
3	Cork W.	Baltimore '97 : frequent—Phillips.
4	Cork Mid	Crosshaven '00 : common—Phillips.
5	Cork E.	Ballycotton '96 : common—Phillips.
6	Waterfd.	Stradbally '99—P. Frequent—Hart *384*.
8	Limrck.	Ringmoylan '85–6—Stewart *863*.
9	Clare	Spanish Pt. '00, G. Fogerty! Inishmore; Kilrush.
11	Kilkny.	Snowhill '99—P.
12	Wexford	Carnsore '97—Marshall. Frequent.
16	Galw. W.	Inishmacdara '96—P. Inishbofin '75—More *016*.
20	Wicklow	Bray Head '00, Brittas Bay '96—P.
21	Dublin	Rush '00 : frequent—Colgan.
27	Mayo W.	Dooagh on Achill Island '99—Colgan.
31	Louth	Clogher and Dunany Heads '96—P.
34	Dongl. E.	North and south coasts frequent—*Fl. Don*.
35	Dongl. W.	Coast frequent—*Fl. Don*.
38	Down	Rockport '00—P. Common—*Fl. NE*.
39	Antrim	Mouth of Six-mile river on L. Neagh '00—Davies. Common on coast—*Fl. NE*.

Somewhat local around the coast. In one interesting inland locality, Lough Neagh, where several maritime plants occur.

Montia fontana L. Water Blinks.

Census 36—East 14, Centre 11, West 11.

Divisions all, *except 8 Limerick, 9 Clare, 22 Meath, 23 Westmeath*. Strongly calcifuge, and consequently rare in the Central Plain, where it is generally confined to the patches of non-calcareous rocks. Will, no doubt, be found to occur in all divisions.

Elatine hexandra DC. Water-wort.

Census 10—East 3, Centre 0, West 7.

1	Kerry S.	Cloonee '00 : frequent and locally abundant—Scully.
2	Kerry N.	Killarney '99 : south only—Scully.
3	Cork W.	Dunmanway '00, Barlogue, Gougane Barra—Phillips.
9	Clare	Doonbeg bog, D. Moore—*Cyb*. I. SW. only, rare.

16 Galw. W. Roundstone '96—P. Inishbofin '75—More *616*.
34 Dongl. E. Bannus Lough near Pettigoe—*Fl. Don.*
35 Dongl. W. Gweedore, L. Eske, &c.: very rare—*Fl. Don.*
37 Armagh Mullaghmore Lough '93—P.
38 Down Lough Briclan '95—Lett! Lakes in centre, rare.
40 L'derry. Enagh Lough, Lough Beg, and R. Bann at Coleraine, D. Moore—*Fl. NE.*

The Rathlin Island record is doubtful.

Elatine Hydropiper L.

(37 Armagh Canal at Newry, W. Thompson—*Fl. Ulst.* '64. Extinct?)
38 Down Canal at Lisburn '98—Davies! L. Briclan '95—Lett! Very rare—*Fl. NE.*

Apparently extinct in several of its old stations.

Hypericum Androsæmum L. Tutsan.

Divisions all. Frequent throughout.

***Hypericum calycinum** L. St. John's-wort (genus).

2 Kerry N. Naturalized at Killarney '99—Scully.
5 Cork E. Midleton '00, Eastferry '96—Phillips.
12 Wexford Courtown sandhills c. '96—P. Enniscorthy—*Cyb.* I.
20 Wicklow Powerscourt abundant '98—P.

Thoroughly established in the above stations and probably elsewhere.

***Hypericum hircinum** L.

4 Cork Mid Crosshaven '00—Phillips. Monkstown, Carroll—*Cyb.* I.
5 Cork E. Glanmire '00, Eastferry '96—Phillips. Local.
Naturalized and spreading about Cork.

Hypericum perforatum L.

Census 37—East 14, Centre 13, West 10.

Divisions all, *except 1 Kerry South, 28 Sligo, and 29 Leitrim.* Calcicole, being generally scarcer on non-calcareous rocks, as in divisions 2, 12, 16, 20, 27, 30, 32, 35, 36, where it is distinctly rare. Frequent in the north-east, in spite of the absence of limestone.

Hypericum dubium Leers.

Census 33—East 13, Centre 10, West 10.

1	Kerry S.	Killarney '99 : frequent—Scully.
2	Kerry N.	Killarney '00 : rather frequent—Scully.
3	Cork W.	Skibbereen '96 : frequent—Phillips.
4	Cork Mid	Donoughmore '96 : common—Phillips.
5	Cork E.	Ballyhooly '00 ; frequent—Phillips.
6	Waterfd.	Dungarvan '99 : frequent throughout—P.
7	Tipp. S.	Cahir '00, Thurles, Vale of Aherlow—P.
8	Limrck.	Askeaton, Mullagh, Curragh Chase, '00—P.
9	Clare	Inchiquin L. '99—Miss Knowles. Gleninagh, '95—P.
10	Tipp. N.	Cloughjordan '00, Portumna '97—P.
11	Kilkny.	Kilkenny '00—Phillips. Common throughout—P.
12	Wexford	Ballywilliam '98—P. Frequent in N.—B. & M. *103*.
13	Carlow	Tullow '99 : frequent throughout—P.
14	Queen's	Stradbally '97, Maryborough, Emo, Graigue—P.
15	Galw. SE.	Moyode '99—P. Frequent, chiefly in the east.
16	Galw. W.	Moycullen '99—P. Maam, Clonbur, '95—M. & S. *545*.
17	Galw. NE.	Knockmae '99 : common—P.
18	King's	Killyon '00, Clonad wood '96—P.
19	Kildare	Nurney '97, Athy, Levitstown, Ballymore—P.
20	Wicklow	Glendalough '94 : Ovoca River basin f.—P. Rare.
23	Westmth.	North of Moate '99, Killinure Lough '98—P.
25	Roscomn.	Lough Key '97—P.
26	Mayo E.	Cong '95—M. & S. *545*.
27	Mayo W.	East shore of Lough Conn '00—P.
28	Sligo	Annaghmore '00—P.
29	Leitrim	Rinn Lough '99 —P.
31	Louth	Greenore and Ballymascanlan '00, Braganstown '96—P.
33	Ferman.	Belcoo '00—P.
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Killylea, Newry, &c. : frequent throughout, '92—P.
38	Down	Marino '00—P., and along Lagan Canal only.
39	Antrim	Glenmore '97—Davies *259*. Belfast to Lisburn only.
40	L'derry	Ballykelly '96, Mrs. Leebody—P. *774*.

Of general occurrence throughout the southern half of Ireland; much rarer and distinctly local in the northern half.

Hypericum tetrapterum Fr.

Divisions all. Frequent.

Hypericum humifusum L.

Census 34—East 14, Centre 9, West 11.

1	Kerry S.	Kenmare '99: frequent—Scully.
2	Kerry N.	Listowel '99: frequent—Scully.
3	Cork W.	Skibbereen '97: common—Phillips.
4	Cork Mid	Coachford '97: common—Phillips.
5	Cork E.	Near Glanmire '98: common—Phillips.
6	Waterfd.	Clonea, Stradbally, '99—P. Dunmore—Mrs. Tatlow!
7	Tipp. S.	Near Carrick-on-Suir '00—P.
8	Limrck.	Limerick '97, O'Brien—Hb. L.F.C.!
9	Clare	Lisdoonvarna '00—Miss Knowles. Frequent in west.
10	Tipp. N.	Bushfield '99—P.
11	Kilkny.	Coppenagh '98—P.
12	Wexford	Ballywilliam '98—P. Frequent.
13	Carlow	Gowlin '99, Polmounty River '98—P.
14	Queen's	Mountrath '97—P.
15	Galw. SE.	Loughrea '00—Phillips. Chevy Chase, Kinvarra, '00—P.
16	Galw. W.	Kylemore '98—Colgan. Throughout, rather rare.
17	Galw. NE.	Knockmae '00—P.
20	Wicklow	Avondale '00, Laragh, Shillelagh—P. ? Frequent.
21	Dublin	Howth '00: rare—Colgan.
22	Meath	Slieve-na-calliagh '00—P.
26	Mayo E.	Near Claremorris '00—P. Clonbur '95—Marshall.
27	Mayo W.	Lough Conn '00—P. Mallaranny; Westport.
29	Leitrim	Ballinamore '00—Somerville.
30	Cavan	Cootehill—Waddell.
31	Louth	Collonbeg and Mount Oriel—*Ir. Fl.* '33.
32	Monaghn.	Creeve Lough and Lough Avaghon '00—P.
33	Ferman.	Gubbaroe Pt. on Lower L. Erne '81-2—Barrington *108*.
34	Dongl. E.	Throughout, frequent—*Fl. Don.*
35	Dongl. W.	Throughout, frequent—*Fl. Don.*
36	Tyrone	Newtownstewart '96: rare—Miss Knowles.
37	Armagh	Narrow-water and Armagh: very rare, '92—P.
38	Down	Hilltown '97—P. Frequent—*Fl. NE.*
39	Antrim	Ballymena '00—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Magilligan '97—Mrs. Leebody. Frequent—*Fl. NE.*

A rare plant in most divisions, though it probably occurs in all. Distinctly calcifuge, and seldom on the limestone.

Hypericum pulchrum L.

Divisions all. Common.

Hypericum hirsutum L.

Census 4—East 4, Centre 0, West 0.

19	Kildare	Carton '94—P.
21	Dublin	Woodlands '00 : local—Colgan.
22	Meath	Near Navan '96—P.
39	Antrim	Macedon Point '93—R. Hanna.

Hypericum elodes L.

Census 23—East 13, Centre 1, West 9.

1	Kerry S.	Kenmare '99 : frequent and locally abundant—Scully.
2	Kerry N.	Spa '99 : frequent and locally abundant—Scully.
3	Cork W.	Skibbereen '97 : frequent—Phillips.
4	Cork Mid	Donoughmore '98 : frequent—Phillips.
5	Cork E.	Near Glanmire '98 : frequent—Phillips.
6	Waterfd.	Clonea, Ballyscanlan, '99—P. Coumduala R.—Hart *381*.
7	Tipp. S.	SW. of Cahir '00—P.
9	Clare	Ennistymon '99—Miss Knowles. Frequent in the west.
11	Kilkny.	Tory Hill '99, Brandon Hill, Graiguenamanagh—P.
12	Wexford	Ferns '97—D.N.F.C. *306*. Frequent—B. & M. *103*.
13	Carlow	Gowlin '99 : widespread and not rare—P.
16	Galw. W.	Roundstone '96—P. Common.
20	Wicklow	Drumgoff '97—Colgan. Local.
21	Dublin	Three Rock Mountain '00 : rare—Colgan.
27	Mayo W.	Mallaranny '99—Marshall. Very frequent.
29	Leitrim	Tullaghan '99—P.
31	Louth	Ravensdale '00—Mrs. Swan.
34	Dongl. E.	Throughout, frequent—*Fl. Don.*
35	Dongl. W.	Throughout, frequent—*Fl. Don.*
37	Armagh	West slope of Camlough Mountain '96 (Lett)—Colgan.
38	Down	Conlig '00—P. Rare, and chiefly in south.
39	Antrim	Rathlin Island '92—P.
40	L'derry	Enagh Lough '96—Mrs. Leebody.

Strongly calcifuge. Local, and rare except in a few of those divisions from which limestone is absent, or nearly so. Absent from the whole Central Plain.

‡Althæa officinalis L. Marsh Mallow.

Census 12—East 2, Centre 2, West 8.

1 Kerry S. ‡Waterville '00: rather frequent—Scully.
2 Kerry N. ‡Ballybunnion '94: rather rare—Scully.
3 Cork W. ‡Cape Clear '96: south only, rare—Phillips.
5 Cork E. Youghal—Allin *Fl.* '83. Castlemartyr—Power *Fl.*
6 Waterfd. Kilfarassy, Miss A. Taylor—*Cyb.* I.
9 Clare Lehinch—More *600*. Limerick—Mackay *521*. Rare.
16 Galw. W. One mile west of Roundstone '91—Levinge!
25 Roscmn. *Near Ballinasloe '99—P.
27 Mayo W. Old head on Clew Bay, Miss Grubb—*Cyb.* I.
34 Dongl. E. *Near Bundoran—*Fl. Don.*
35 Dongl. W. *Bunbeg established, Dunkineely, Glen Bay—*Fl. Don.*
36 Tyrone By Lough Neagh '96—Miss Knowles.

Established occasionally along the west coast.

Lavatera arborea L. Tree Mallow.

Census 12+(4)—East 8, Centre 1, West 3+(4).

1 Kerry S. Little Skellig—Delap '93 *273*. †Rare—Scully.
2 Kerry N. †Ballybunnion '99: rare—Scully.
3 Cork W. Cape Clear '96: frequent on coast—Phillips.
4 Cork Mid †Kinsale '94—Phillips.
5 Cork E. Youghal '00, Gyleen, Roche's Point—Phillips.
6 Waterfd. Newtown Head cliffs "looking wild" '82—Hart *384*.
(8 Limrck. *Foynes '00—Miss C. O'Brien.)
9 Clare Inishmore '95—P. Black Head; Spanish Point.
12 Wexford Duncannon Fort—B. & G. '89 *100*. †South coast.
(15 Galw.SE. *Parkmore '99—P.)
20 Wicklow Cliffs of Bray Head '94—P.
21 Dublin Ireland's Eye abundant '00—P. Rare—Colgan.
(27 Mayo W. *Achill Sound '99—Marshall.)
(28 Sligo *Rosses Point '00—Tetley.)
38 Down ‡Killough '93, Stewart—Hb. S. & A.M.!
39 Antrim Whitepark Bay cliffs '00—Miss Knowles. North coast frequent.

Beyond reasonable doubt native on sea-cliffs and stacks in 1, 3, 5, 6, 9, 20, 21, 39. Its rank is uncertain elsewhere.

Malva moschata L. Musk Mallow.

Census 31—East 15, Centre 9, West 7.

1 Kerry S. ‡Kenmare '99: rare—Scully.
2 Kerry N. *Near Coolbane '96—Scully.
3 Cork W. Skibbereen '91: rare—Phillips.
4 Cork Mid Ballincollig '98: rare—Phillips.
5 Cork E. Whitegate '95: frequent—Phillips.
6 Waterfd. Kilmacthomas '99—P. Frequent throughout.
7 Tipp. S. Ardfinnan '00, †Farranaleen, †Fethard, Carrick—P.
8 Limrck. Mullagh '00—P. Frequent in the north.
10 Tipp. N. Roscrea '00—Phillips. ‡Thurles '98—P.
11 Kilkny. Thomastown '00—Phillips. Common throughout—P.
12 Wexford Macmine '97—Marshall *539*. Frequent throughout.
13 Carlow Leighlinbridge '99: centre and south common—P.
14 Queen's Queen's Co. (J. Douglas)—More '72 *614*.
16 Galw. W. Salthill '00—Phillips. Ashford, Miss Jackson—*Cyb.* II.
17 Galw. NE. ‡Tuam '99—P.
18 King's Ballyduff—*Ir. Fl.* '33.
19 Kildare ‡Curragh '97—P.
20 Wicklow Wicklow Head '85—C. F. D'Arcy. Very rare.
21 Dublin Near Tallaght '93—P. *719*. Very rare.
22 Meath Slieve-na-calliagh '00: widespread but rare—P.
23 Westmth. †Knock Drin once found—Levinge '94 *484*. Very rare.
24 Longfd. Limestone rocks north of Ballymahon '00—P.
25 Roscomn. Mount Talbot '97—P.
26 Mayo E. Cong '95—M. & S. *545*.
28 Sligo ‡Knocknarea Glen, ‡Lough Arrow, '97—P.
31 Louth North of Dundalk, Templeton—*Fl. Ulst.* '64.
34 Dongl. E. ‡Carrigans '92, Mrs. Leebody—*Fl. Don.* Very rare.
37 Armagh Newry and Tanderagee, and in north: rare, '92—P.
38 Down †Near Comber '90—P. †Rare—*Fl. NE.*
39 Antrim Crumlin '99—Miss Knowles. †Rare—*Fl. NE.*
40 L'derry Moneymore, Whan—*Fl. Ulst.* '64. †Rare—*Fl. NE.*

Very local. Common in the south-east, in 6, 11, 12, and 13, where it looks native. In many of its stations it is no doubt an escape.

Malva sylvestris L. Common Mallow.

Divisions all. Chiefly by the coast, and mostly near houses.

Malva rotundifolia L. Dwarf Mallow.

Census 23—East 11, Centre 5, West 7.

1	Kerry S.	*Aughils '94—Scully.
2	Kerry N.	*Near Ballymalis '96—Scully.
3	Cork W.	Barley Cove '96 : rare—Phillips.
4	Cork Mid	Crosshaven '00 : rare—Phillips.
5	Cork E.	Near Midleton and Killavullen—Allin *Fl.* '83.
7	Tipp. S.	Near Clonmel—Miss S. Grubb '00.
9	Clare	Doonbeg '99—Miss Knowles. West, rare.
10	Tipp. N.	Cloughjordan '00—P.
11	Kilkny.	Kilkenny '96—Mrs. Persse.
12	Wexford	Kilmanock and †Carnsore—B. & G. *100*, *101*.
14	Queen's	Stradbally '97—P.
15	Galw. SE.	Common on the coast '99—P.
16	Galw. W.	Inveran '95—Colgan. †Kilbeg ferry '99—P.
17	Galw. NE.	Rinmore '00—Phillips. About Galway only.
20	Wicklow	Wicklow '00—C. Waterfall. Bray and Delgany—P.
21	Dublin	Skerries '00 : local—Colgan.
22	Meath	Slane '95: †frequent—P.
31	Louth	Blackrock '00—Mrs. Swan. Whole coast frequent.
33	Ferman.	‡Levally '00—West.
36	Tyrone	By Lough Neagh '96—Miss Knowles.
38	Down	Downpatrick '00—P. Rare—*Fl. NE.*
39	Antrim	Magheramorne '90—P. Rare, and south only—*Fl. NE.*
40	L'derry	Portstewart '00—Miss Knowles.

Like the last, of somewhat doubtful status, the more satisfactory stations being situated on the coast.

Radiola linoides Roth. All-seed.

Census 20—East 9, Centre 2, West 9.

1	Kerry S.	Killarney '00 : frequent on coast, rare inland—Scully.
2	Kerry N.	Ballybunnion '94 : coast frequent, inland rare—Scully.
3	Cork W.	Schull '96: frequent in the south—Phillips.
5	Cork E.	Ballintowtas and Kilbree—Allin *Fl.* '83.
6	Waterfd.	Fairy Hill, Miss A. Taylor—*Cyb.* I.
9	Clare	Near Kilrush '85–6—Stewart *863*. Rare.
12	Wexford	Greater Saltee Island '82—Hart *384*.
13	Carlow	Near Gowlin '99—P.

16	Galw. W.	Glen Inagh '98—Colgan. Widespread and frequent.
26	Mayo E.	Shore of Lough Cullin, More—*Cyb.* I.
27	Mayo W.	Mallaranny '99—Marshall. Pontoon '00—P. Achill I.
28	Sligo	Inishmurray '96, Barrington!—P. *745*.
31	Louth	Anglesey Mountain '99—Lett and Waddell.
34	Dongl. E.	Malin Head c., Dunaff Head, '98—Hart *405*.
35	Dongl. W	Tory Island, &c.: frequent—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Bog south of Portadown '92—P.
38	Down	Newcastle '99—Druce *286*. Rare—*Fl. NE.*
39	Antrim	Bushfoot '87—P. Rathlin I.—Stewart *857*.
40	L'derry	Portrush to Downhill abundant, D. Moore—*Cyb.* II.

Strongly calcifuge, with a corresponding distribution.

Linum catharticum L. Purging Flax.

Divisions all. Abundant.

Linum angustifolium Huds. Flax.

Census 14+(1)—East 10, Centre 1, West 3+(1).

1	Kerry S.	Kenmare '99: rare and local—Scully.
2	Kerry N.	Coolbane '96—Scully.
3	Cork W.	Schull '98—Mrs. Swan. Frequent in south—Phillips.
4	Cork Mid	Crosshaven '00: frequent in south—Phillips.
5	Cork E.	Youghal '98: frequent—Phillips.
6	Waterfd.	Tramore '99—P. Portlaw—Flemyng. Coast frequent.
7	Tipp. S.	Cahir '00—Phillips. Clonmel—P. Powerstown.
11	Kilkny.	Tory Hill '99—P. Kilkenny '97—Mrs. Persse! Borris.
12	Wexford	Gorey '97—Marshall *539*. Frequent throughout.
13	Carlow	Milford '98—P.
(15	Galw. SE. ?	Near Woodford (M. Dowd)—More '72 *614*. ?—P.)
19	Kildare	Leixlip '96—P.
20	Wicklow	Greystones '97—P. Very rare.
21	Dublin	Chapelizod '99: rare—Colgan.
22	Meath	Laytown '96—P. Gormanstown—More *614*.

Excepting the single Galway station, which has never been confirmed, this plant has a continuous range over the south and east, from Kerry to the Boyne.

Geranium sanguineum L. Bloody Crane's-bill.

Census 11+(3)—East 1+(3), Centre 4, West 6.

9	Clare	Ballyvaughan '00—Phillips. Burren and Aran common.
10	Tipp. N.	Esker near Cloughjordan, c. '00—P. L. Derg frequent.
15	Galw. SE.	Garryland '00: c. in SW.—P. L. Derg c.—Colgan.
16	Galw. W.	NE. of Ross Lake '99—P. Oughterard; Galway.
17	Galw. NE.	Near Knockmae '99, and common on Lough Corrib—P.
18	King's	Clonad Wood! '94—Miss E. Russell.
(20	Wicklow	Killincarrig and Bray—*Ir. Fl.* '33. ?Extinct.)
21	Dublin	Howth '00—Colgan. Coast, locally abundant.
25	Roscomn.	Bridewell near Athlone, P. Browne—*Cyb.* I.
26	Mayo E.	Glen Corrib and Ballycurrin c., Miss Jackson—*Cyb.* II.
34	Dongl. E.	Ballyshannon—*Fl. Don.*
35	Dongl. W.	St. John's Point—*Fl. Don.*
(38	Down	Crawfordsburn, R. O. Cunningham—*Fl. NE.* ?Extinct.)
(39	Antrim	Portrush, Dickie—*Fl. Ulst.* '64. ?Extinct.)

***Geranium Phæum** L. Dusky Crane's-bill.

Census 10—East 5, Centre 4, West 1.

5	Cork E.	*Midleton (Allin)—More '72 *614*. Lota Wood—Power *Fl.*
8	Limrck.	*Curragh Chase! '00—O'Brien. *Glenstal—Hart *369*.
22	Meath	Ballybeg "for many years," G. Dawson—More '72 *614*.
30	Cavan	*Cavan '96—P.
33	Ferman.	*Rossory, spreading, '00—West.
34	Dongl. E.	*Near Pettigoe—*Fl. Don.*
36	Tyrone	Coalisland '96—Miss Knowles.
37	Armagh	*Mullaghmore Lough '92—P.
38	Down	*Ballykinler '86—P. *Knock Glen, Stewart—*Fl. NE.*
39	Antrim	Near Skerry '99—Miss Knowles. Island-magee (R. Tate)—More *614*.

Has had a garden origin everywhere, but appears naturalized in some of its stations.

Geranium sylvaticum L.

(38	Down	Near Holywood [?Marino]—*Fl. Ulst.* '64. Escape?)
39	Antrim	Glenarm '90, Cairncastle '83—P.

Not unfrequent about Glenarm, and confined within a radius of a few miles of that place. Perhaps naturalized at Glenstal, Limerick (Hart *369*).

Geranium pratense L.

39 Antrim Whitepark Bay '00—Mrs. Swan. Coast from Portrush to Ballycastle—S. & P. *874*.

Abundant in its limited range on the Antrim coast. Occurs as an escape in 3, 4, 15, 20, 34, 37.

Geranium pyrenaicum L.

Census 21+(2)—East 12+(2), Centre 6, West 3.

4 Cork Mid ‡Near Charleville (T. Allin)—More '72 *614*.
(5 Cork E. *Glanmire '75, &c.—Allin *Fl.* Casual—Phillips.)
6 Waterfd. Passage—B. & G. '89 *100*. Carrick-on-Suir—*Cyb.* II.
9 Clare Ballyallia '00—R. D. O'Brien!
11 Kilkny. Kilkenny '97—P. Rare.
12 Wexford Gorey and Wexford '97—Marshall *539*.
13 Carlow Tullow '99, Bagenalstown, Carlow—P.
14 Queen's Graigue '98—P. Barrow below Athy '84—Hart *383*.
15 Galw. SE. Near Craughwell '99—Mrs. Joyce *442*.
18 King's Birr '00, Edenderry '96—P.
19 Kildare Kildare '97: frequent—P.
20 Wicklow Newcastle '00—C. Waterfall. Frequent in NE.—P.
21 Dublin Sutton '00: frequent—Colgan.
22 Meath Navan '00: common throughout—P.
23 Westmth. North of Moate '99—P. Rare.
24 Longfd. Ballymahon '00—P.
26 Mayo E. Ballinrobe '94—Mrs. Persse!
27 Mayo W. Near Belmullet, D. Moore—*Cyb.* I.
31 Louth Dundalk! '00—Mrs. Swan. Frequent.
36 Tyrone Newtownstewart '96—Miss Knowles.
(37 Armagh *Loughgall '54—More: not found—P.)
38 Down Saul '90—P. Rare—*Fl. NE.*
39 Antrim Whitewell '90—W. D. Donnan.

Generally rare and local. Attains its maximum along the east coast.

Geranium molle L.

Divisions all. Common.

†Geranium pusillum L.

Census 6—East 3, Centre 2, West 1.

5 Cork E. Youghal '00, Whitegate '96—Phillips.
6 Waterfd. Tramore, *Hb.* T. Chandlee—*Cyb.* II.
8 Limrck. Ringmoylan '85-6—Stewart *863*.

9 Clare Miltown Malbay '30, Harvey's *Memoir*—*Cyb.* II.
21 Dublin Old Connaught '00—J. Meade! Portrane; Lambay I.
26 Mayo E. Ballinrobe '00—Stanhope Kenny!

Old records from 4, 11, 20, 39 are doubtful. Possibly introduced in all stations.

Geranium rotundifolium L.

Census 5—East 3, Centre 0, West 2.

3 Cork W. Near Ballinadee—Allin *Fl.* '83. Rare—Phillips.
4 Cork Mid Ring '00 (Scully), Blackrock, Douglas: local—Phillips.
5 Cork E. Carrigtwohill '00: frequent in south—Phillips.
9 Clare Near Ballyvaughan! '95—P. B. O'Kelly.
12 Wexford Near New Ross '99—Phillips *672*.

A few old records are discarded as probably erroneous.

Geranium dissectum L. Dove's-foot.

Divisions all. Frequent.

Geranium columbinum L.

Census 19—East 9, Centre 5, West 5.

1 Kerry S. Kenmare '98—P.
3 Cork W. Inchigeela '97: rare—Phillips.
4 Cork Mid Ballincollig '99: rare—Phillips.
5 Cork E. Near Castletownroche '00: rare—Phillips.
7 Tipp. S. Clonmel '97—P. Ardgeeha, Ballylinch—*Cyb.* II.
8 Limrck. Askeaton, Mullagh, '00—P. Foynes—Stewart *863*.
9 Clare Ballyvaughan! '95—P. B. O'Kelly.
10 Tipp. N. Lough Derg near Dromineer '98—P.
11 Kilkny. Thomastown '00—Phillips.
12 Wexford Near New Ross '99—Phillips. Frequent.
13 Carlow By R. Barrow above Borris '99—P.
15 Galw. SE. Gort '00—P. Portumna—*Cyb.* I. Frequent in SE.
17 Galw. NE. Between Kilcornan and Rahasane '99—Mrs. Joyce *441*.
19 Kildare Poulaphuca '00—P.
20 Wicklow Poulaphuca '00—P. Murrough, D. Moore—*Cyb.* I.
21 Dublin Feltrim Hill '00—Colgan.
26 Mayo E. Lough Mask unquestionably native—Marshall '99 *541*.
31 Louth †Dundalk '00—Mrs. Swan! C.bellingham—Butler *185*.
36 Tyrone Near Urney, Admiral Jones—*Cyb.* I.

Chiefly in the southern half of Ireland, generally on limestone rocks, where it has all the appearance of a native.

Geranium lucidum L.

Census 32+(1)—East 10+(1), Centre 11, West 11.

1	Kerry S.	Kenmare '99 : local—Scully.
2	Kerry N.	Abbeydorney '99 : locally abundant—Scully.
3	Cork W.	Inchigeela '00 : frequent—Phillips.
4	Cork Mid	Ballincollig '99 : frequent—Phillips.
5	Cork E.	Midleton '00 : common—Phillips.
6	Waterfd.	Cappagh '99—P. Passage East '93—B. & M. *MS.*
7	Tipp. S.	Fethard! '00—Phillips. Cahir '00—P.
8	Limrck.	Lough Gur '00—P. Common in the north.
9	Clare	Ennistymon '99—Miss Knowles. Frequent.
10	Tipp. N.	Drominagh '96—Colgan.
11	Kilkny.	Callan '00—Mrs. Persse. Frequent—P.
(12	Wexford	*Kilmanock '92—B. & M. *MS.*)
14	Queen's	Rathdowney '00—Phillips.
15	Galw. SE.	Loughrea '00—Phillips. Common in W., rare in E.
16	Galw. W.	Bleanoran '99—P. Clonbur, Cong, '95—M. & S. *545*.
17	Galw. NE.	Barbersfort '99 : common in west half—P.
18	King's	Birr! '00—Phillips.
19	Kildare	Carton '94, Poulaphuca '00—P.
20	Wicklow	Poulaphuca '00—P.
21	Dublin	Feltrim Hill '93—Colgan.
22	Meath	Bective '96—P. Frequent.
23	Westmth.	Mullingar '97—Carr. Frequent.
24	Longfd.	Elfeet Bay '00—P. Lough Ree only, common.
25	Roscomn.	Mote Park '97 : common throughout—P.
26	Mayo E.	Ballyhaunis '00—P. Throughout, frequent.
28	Sligo	Annaghmore '00—P. Frequent, especially in the east.
29	Leitrim	Drumahaire '99—P. Widespread, frequent.
30	Cavan	Cavan '96—P. Frequent in NW.—Stewart *854*.
33	Ferman.	Devenish '00—West & Tetley. Common in SW.
34	Dongl. E.	Belleek, &c. : extreme south only—*Fl. Don.*
35	Dongl. W.	St. John's Point—*Fl. Don.*
39	Antrim	Glenariff '93—Shoolbred *837*. Frequent—*Fl. NE.*
40	L'derry	Magilligan '97—Mrs. Leebody. Benevenagh '85—P.

Strongly calcicole, with a characteristic distribution, almost every station being on limestone (or on basalt in the north-east).

Geranium Robertianum L. Herb Robert.

Divisions all. Common.

Erodium cicutarium L'Hérit. Stork's-bill (genus).

Maritime counties all, *except 29 Leitrim* (the coast of which is rocky): namely 1, 2, 3, 4, 5, 6, 9, 12, 15, 16, 17, 20, 21, 22, 27, 28, 31, 34, 35, 38, 39, 40. Rare inland, as follows:—

5	Cork E.	Limestone hill near Midleton '96—Phillips.
8	Limrck.	‡Limerick '97, Bentley—Hb. L.F.C.!
11	Kilkny.	†Kilkenny, roadside, '96—Mrs. Persse!
16	Galw. W.	†Kilbeg Ferry, wayside, '99—P.
20	Wicklow	†Kilmacanoge '94—P.
38	Down	†Castlewellan ['90]—S. & P. *873*.
39	Antrim	L. Neagh at mouth of Six-mile Water '00—Davies.
40	L'derry	Benevenagh, 1100 feet, '92—P.

Erodium moschatum L'Hérit.

Census 20—East 9, Centre 2, West 9.

1	Kerry S.	Bunaw '94: rare and local—Scully.
2	Kerry N.	Ardfert '94: rare and local—Scully.
3	Cork W.	Skibbereen '97: frequent near coast—Phillips.
4	Cork Mid	Douglas '00: frequent on coast—Phillips.
5	Cork E.	Youghal '00: frequent near the sea—Phillips.
6	Waterfd.	Tramore '89—W. W. Flemyng.
8	Limrck.	Newcastle '00—O'Brien! Limerick—Bentley! Glin.
9	Clare	Cliffs of Moher '00—Miss Knowles. Inishmore '90—*651*.
12	Wexford	Rosslare '97—Marshall *539*. South chiefly, frequent.
16	Galw. W.	Clifden '94, Miss Jackson—*Cyb.* II.
17	Galw. NE.	Rinmore! '00—Phillips.
18	King's	‡Killeagh '96—P.
20	Wicklow	Wicklow '00—C. Waterfall. Arklow and near Bray—P.
21	Dublin	Howth '95: rare—Colgan.
27	Mayo W.	Achill Island '40, Babington *in Hb.*—*Cyb.* II.
31	Louth	Greenore '00—P.
34	Dongl. E.	‡Near Ballyshannon, H. Allingham—*Fl. Don.*
35	Dongl. W.	‡Rathmullan—*Fl. Don.*
38	Down	Dundrum '99—B.N.F.C. *139*. Very rare—*Fl. NE.*
39	Antrim	Ballycastle '86—P. Very rare—*Fl. NE.*

Inland in Limerick and King's Co. only, where it is probably an introduction. Chiefly about towns and roadsides by the sea.

Erodium maritimum L'Hérit.

Census 11+(2)—East 8+(2), Centre 0, West 3.

3	Cork W.	Schull &c., '96: frequent on SW. coast—Phillips.
4	Cork Mid	Ringaskiddy (Carroll)—Allin *Fl.* '83.
5	Cork E.	Ballycotton—Drummond '19 *287*.
6	Waterfd.	Tramore, T. Chandlee—*Cyb.* I.
9	Clare	Inishmore '90—Nowers and Wells *651*.
12	Wexford	Wexford '97—Marshall. Frequent all round the coast.
16	Galw. W.	Shore at Aughris—Wade 1804 *902*.
20	Wicklow	Bray Head '00—P.
21	Dublin	Howth '00: local—Colgan.
22	Meath	Laytown and Mayden Tower '96—P.
38	Down	Dundrum '99—B.N.F.C. *139*. Rare—*Fl. NE.*
(39	Antrim?	Glenarm, R. Oulton; Ballycastle, Miss Hincks—*Fl. Ulst.*)
(40	L'derry?	Castlerock and Coleraine, W. T. Whan—*Fl. Ulst.* '64).

South and east coasts chiefly. I doubt the Antrim and Derry records.

Oxalis Acetosella L. Wood Sorrel.

Divisions all. Abundant.

Ilex Aquifolium L. Holly.

Divisions all, *except 22 Meath*. No doubt universal.

Euonymus europæus L. Spindle-tree.

Divisions all. Rather calcicole, and often rare off the limestone.

Rhamnus catharticus L. Purging Buckthorn.

Census 17+(2)—East 2+(2), Centre 9, West 6.

2	Kerry N.	Killarney '00—Scully.
9	Clare	Ballyvaughan '95—Colgan. Frequent in the NW.
10	Tipp. N.	Ballingarry '00, Barracurragh, Lough Derg f.—P.
14	Queen's	Maganey '98—P. Not infrequent along the Barrow.
15	Galw. SE.	Lough Fingall '99—P. F. on L. Derg and in west.
16	Galw. W.	Bleanoran '99—P. On L. Corrib and L. Mask, rare.
17	Galw. NE.	Clonbrock '00—R. E. Dillon. L. Corrib frequent—P.
18	King's	Clonad wood '96, Shannon Harbour '98—P.
19	Kildare	Nurney '97—P. And by the Barrow occasionally.
20	Wicklow	Luggela and Murrough, D. Moore—*Cyb.* I.

23 Westmth. Knock Eyon—Levinge '94 *484*. L. Ree frequent—P.
24 Longfd. Chapel Island in Lough Ree '97—P.
25 Roscomn. Mote Park, Mount Talbot, Galey, '97—P.
26 Mayo E. NW. of Claremorris '00—P. L. Mask; L. Carra.
27 Mayo W. Lough Cullin, More—*Cyb.* I.
30 Cavan Farnham '96—P.
33 Ferman. Heron Island '92—P. Lower L. Erne only, common.
(39 Antrim L. Beg and L. Neagh, D. Moore—*Cyb.* I. ? Extinct).
(40 L'derry L. Beg and Salterstown, D. Moore—*Cyb.* I. ? Extinct).

Chiefly by the lakes and rivers of the Central Plain, and very rare off the limestone. Not seen in the north-east since Lough Neagh was drained half a century ago. Apparently extinct in Cork, if it ever was there.

Rhamnus Frangula L. Alder Buckthorn.

Census 12+(2)—East 3+(2), Centre 5, West 4.

2 Kerry N. Killarney '99—Scully.
9 Clare Glanquin '92—Levinge *482*.
10 Tipp. N. Friar's Lough '97—P.
14 Queen's Mountmellick bog 1732, Annot. in Threlkeld—*Cyb.* II.
15 Galw. SE. Woodford '98—P. L. Derg and the south-west, rare.
16 Galw. W. South shore of Lough Mask '95—M. & S. *545*.
18 King's Clonad wood '96—P.
19 Kildare Near Enfield '84, E. P. Wright—*Cyb.* II.
20 Wicklow Murrough, D. Moore—*Cyb.* I.
24 Longfd. Inchcleraun on Lough Ree '97—P.
26 Mayo E. Lough Mask S. shore '95—M. & S. *545*, and E. shore '91, Vowell—*Cyb.* II. L. Carra '37—Ball *93*.
(38 Down Near Ballynahinch and Ballygowan, Templeton—*Fl. Ulst.* '64. ? Extinct).
39 Antrim Shane's Castle '91—P. ? Extinct in other stations.
(40 L'derry Creagh I. in L. Beg, D. Moore—*Cyb.* I. ? Extinct).

Drainage and turf-cutting have almost exterminated this shrub in the north-east. Several other records (14, 20) are in need of recent confirmation.

Ulex europæus L. Gorse; Whin.

Divisions all. Common, but more abundant and widespread in the east than in the west.

Ulex Gallii Planch.

Census 29—East 15, Centre 6, West 8.

1	Kerry S.	Kenmare '99 : frequent—Scully.
2	Kerry N.	Killarney '99 : frequent—Scully.
3	Cork W.	Skibbereen '97 : common in south—Phillips.
4	Cork Mid	Donoughmore '96 : common—Phillips.
5	Cork E.	Near Whitegate '98 : common—Phillips.
6	Waterfd.	Dungarvan '99 : abundant—P.
7	Tipp. S.	Slievenaman '00—P. Frequent on mountains in south.
9	Clare	Inishmore '95—P. *738*.
10	Tipp. N.	Arra Mountains c. '99—P. Glenstal '80—Hart *369*.
11	Kilkny.	Tory Hill '99 : common off the limestone—P.
12	Wexford	Enniscorthy '98—P. Frequent, especially near coast.
13	Carlow	Tullow '99 : frequent—P.
14	Queen's	Ballybrophy '00—Phillips.
15	Galw. SE.	Dalystown '97, Chevy Chase '00—P.
16	Galw. W.	Clifden '98—Colgan. Common.
18	King's	Birr '00—Phillips.
19	Kildare	Kilcullen '96, hills near Baltinglass and Blessington—P.
20	Wicklow	Avondale '99 : common—P.
21	Dublin	Howth '00—P. Locally abundant—Colgan.
22	Meath	Slieve Bregh '00—P.
31	Louth	Carlingford Mountain '00—P.
32	Monaghn.	Creeve Lough '00—P.
34	Dongl. E.	Near Moville and Burt (J. Hunter)—Hart '99 *405*.
35	Dongl. W.	In Fanet only—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Fews mountains and common on hills in S. '92—P.
38	Down	Ballynahinch '00—P. Frequent.
39	Antrim	Skerry '99—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Loughinshollen, &c., D. Moore : rare—*Fl. NE.*

Strongly calcifuge, and consequently absent from the greater part of the Central Plain. Absent also from large areas in the west. No doubt some of the gaps in the list will be filled.

Cytisus scoparius Link. Broom.

Divisions all. Strongly calcifuge, and distributed accordingly, generally appearing as soon as the limestone is left. Bog banks occasionally furnish a suitable habitat on the limestone.

Ononis repens L. Rest-harrow.

Census 30—East 14, Centre 6, West 10.

1	Kerry S.	‡Castlegregory '94—Scully.
2	Kerry N.	‡Near Ardfert '92—Scully.
3	Cork W.	Skibbereen '97 : frequent—Phillips.
4	Cork Mid	Crosshaven '00 : frequent—Phillips.
5	Cork E.	Youghal '00 : common—Phillips.
6	Waterfd	Dungarvan '99 : frequent throughout—P.
7	Tipp. S.	Cahir '00—Phillips. Common in the south—P.
8	Limrck.	Curragh Chase '00—P. Frequent in the north.
9	Clare	*Ballyvaughan '95—Colgan.
11	Kilkny.	Inistioge '00—Phillips. Abundant—P.
12	Wexford	Rosslare '97—Marshall. Coast frequent.
13	Carlow	Milford '99—P. Frequent throughout.
14	Queen's	Abbeyleix '98, Grantstown, Maryborough—P.
15	Galw. SE.	Ardrahan '00, Oranmore, Ardfry—P.
16	Galw. W.	Moycullen '99—P.
17	Galw. NE.	Tuam '99—P.
19	Kildare	Kildare '97 : throughout, frequent—P.
20	Wicklow	Blessington '98, Wicklow, Greystones—P.
21	Dublin	Skerries '00 : frequent—Colgan.
22	Meath	Kilmessan '00 : frequent throughout—P.
23	Westmth.	Esker near Moate '99—P. Ladywell—B. & V. *113*.
24	Longfd.	Newtowncashel '00—P.
26	Mayo E.	Ballinrobe '90—Mrs. Persse! Cong '95—M. & S. *545*.
27	Mayo W.	Ballina '00—P.
31	Louth	Ardee '97—P. Chiefly on coast, locally common.
34	Dongl. E.	Fahan (W. E. Hart) and Kilderry—*Fl. Don.*
35	Dongl. W.	Rinboy '98—Hart *405*.
38	Down	Killough '92—P. Coast, frequent—*Fl. NE.*
39	Antrim	Ballycastle '96—P. L. Neagh v.r., coast f.—*Fl. NE.*
40	L'derry	Sands at Benone '94—Mrs. Leebody!

Round almost the whole coast, and abundantly inland in the south-east, thinning out northward and westward. I have no reason to doubt its being indigenous in any of the stations I have seen—that is, in all the recorded divisions excepting 1 to 5, 9, 34, 35 and 40. Mr. Hart considers it native in Donegal (*406*).

Trigonella ornithopodioides DC.

Census 5+(1)—East 5+(1), Centre 0, West 0.

5	Cork E.	Currabinny '00 (Scully)—Phillips.
12	Wexford	Rosslare, Greenore, Lady's Island L. '97—Marshall *539*.
20	Wicklow	Wicklow '00—C. Waterfall. About Wicklow only.
21	Dublin	Howth '00: very rare—Colgan.
31	Louth	Clogher Head '37—J. Ball *93*.
(38	Down	Holywood 1799, Templeton *MS.*—*Cyb.* II. Extinct.

South-east coast only.

***Medicago sativa** L. Lucerne.

Census 13—East 8, Centre 3, West 2.

3	Cork W.	Schull '96—Phillips.
5	Cork E.	Little Island '00, Ballycroneen '98—Phillips.
6	Waterfd.	Tramore '99—Phillips.
8	Limrck.	Mullagh '00—P.
9	Clare	Inishmore '95—P.
10	Tipp. N.	Dromineer '00—Phillips. Cloughjordan '00—P.
12	Wexford	Plentiful by Blackwater '96, Miss M. D'Arcy—*Cyb.* II.
21	Dublin	Portrane '00: rare—Colgan.
22	Meath	Mornington and Oldcastle '96—P.
23	Westmth.	West of Moate '99—P.
37	Armagh	Richhill '92—P. Armagh '80—W. F. Johnson!
38	Down	Craigavad '92—P. Rare.
39	Antrim	Larne '77, Corry—*Fl. NE.*

And in many other places as an obvious introduction. Rush sand-hills, Co. Dublin, is its most satisfactory station: it appears quite naturalized there. In all cases it has sprung from introduced seed.

†Medicago sylvestris Fries.

21	Dublin	Sand-dunes at Portmarnock and Malahide '99—P.

May have been introduced, but has the appearance of a native, and has grown there for at least half a century.

Medicago lupulina L. Black Medick.

Divisions all. Generally common, but appears rare in Donegal.

***Medicago maculata** Sibth. Spotted Medick.

5 Cork E. Youghal '96, Scully—*Cyb.* II. About Cork harbour.
12 Wexford Plentiful by Blackwater '96, Miss M. D'Arcy—*Cyb.* II.
20 Wicklow Rathnew, one large patch, '98—G. Pim *681*.

Apparently established in Cork and Wexford. Several merely casual occurrences are omitted.

‡Melilotus officinalis Lamk. Melilot (genus).

Census 9—East 7, Centre 1, West 1.

4 Cork Mid Blackrock (Alexander)—Power *Fl.* '45. ‡—Phillips.
5 Cork E. ‡Youghal, Queenstown Junct., '96—Phillips. Rare.
9 Clare *Near Ballyvaughan '95, Colgan—*Cyb.* II.
11 Kilkenny Ferrybank '95—M. & S. *545*. There for 40 years.
12 Wexford *Kiltrea, Aughnaclappa—B. & M. '92 *102*. Very rare.
20 Wicklow At Fassaroe occasionally, Barrington—*Guide* '78.
21 Dublin Portrane '00: frequent near coast—Colgan.
37 Armagh *Bessbrook on railway '93—P. *705*.
39 Antrim Glenariff '93—Shoolbred *837*. Larne; Portrush.

Fully naturalized and abundant along the coast of Dublin, and appears naturalized also at Ferrybank. Frequent as a casual.

***Melilotus arvensis** Wallr.

Census 6—East 3, Centre 2, West 1.

5 Cork E. ‡Midleton not established—Allin *Fl.* '83.
7 Tipp. S. Railway at Cahir c. (Wright)—Carroll '57 *191*.
8 Limrck. ‡Limerick '00—P.
15 Galw. SE. Garryland '00, little more than casual—P.
31 Louth About Termonfeckin and Queensborough '96—P.
39 Antrim Kilroot and Larne, abundant, naturalized—S. & P. *874*.

As a casual in Dublin, Down, and elsewhere. Its Antrim stations alone entitle it to a place in the flora.

Trifolium subterraneum L.

20 Wicklow Riverside at Wicklow '00—C. Waterfall!
First found here in 1867.

Trifolium pratense L. Red Clover.

Divisions all. Common.

Trifolium medium Huds. Zigzag Clover.

Census 29—East 13, Centre 8, West 8.

1	Kerry S.	Mouth of Dingle harbour '83—Hart *381*.
2	Kerry N.	East of Tralee '88—Scully.
4	Cork Mid	Donoughmore '96: rare—Phillips.
5	Cork E.	Fermoy '97: rare—Phillips.
6	Waterfd.	Dungarvan '99—P.
7	Tipp. S.	Ballinure '98—P. Widespread but not common.
9	Clare	Lisdoonvarna '00—Miss Knowles. Inishmore—*651*.
10	Tipp. N.	Cloughjordan '00, Thurles, Portumna—P.
12	Wexford	Between Courtown and Gorey '81—Hart *371*.
14	Queen's	Emo '96: frequent and widespread—P.
15	Galw. SE.	Tillyra near Ardrahan '00—Mrs. Joyce!
18	King's	Tullamore and Clara '99—P.
19	Kildare	Nurney '97, Ballymore '00—P.
20	Wicklow	West of Great Sugarloaf '94—P. Rockfield—*Cyb.* I.
21	Dublin	Glenasmole '00: local—Colgan.
22	Meath	Kilmessan and frequent about Navan '00—P.
26	Mayo E.	Carrowkeribly L. '00—P. Near Foxford—*Cyb.* I.
27	Mayo W.	Crossmolina and common in the NE.—P.
28	Sligo	Annaghmore '00—P. Skreen, Dromore W.—Colgan.
31	Louth	Whitestown '00, north base of Carlingford Mtn. '93—P.
32	Monaghn.	Monaghan '00—Somerville.
33	Ferman.	Bilberry Island in L. Melvin '00—P. Frequent.
34	Dongl. E.	North of Belleek '00—P. N. and S. frequent—*Fl. Don.*
35	Dongl. W.	Aranmore, &c.: frequent—*Fl. Don.*
36	Tyrone	Strabane '00—Miss Knowles.
37	Armagh	About Navan Fort '92—P.
38	Down	Newcastle '86—P. Portavoe, Corry—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Common—*Fl. NE.*
40	L'derry	Near Castlerock '85—P. Frequent—*Fl. NE.*

Widely but unevenly distributed over Ireland, and local in most of the divisions.

Trifolium arvense L. Hare's-foot Trefoil.

Census 15—East 11, Centre 0, West 4.

3	Cork W.	Lislee, Inisherkin, Glandore—Allin *Fl.* '83. Rare.
4	Cork Mid	Blackrock—Power *Fl.* '45. Cork—Drummond *287*.
5	Cork E.	Ballycotton and Youghal—Allin *Fl.* '83.

6 Waterfd. Helvick Head, &c., '82—Hart *384*. Frequent on coast.
9 Clare Inisheer ['69] Hart—More *614*.
11 Kilkny. ‡Between New Ross and Inistioge '97—Mrs. Persse!
12 Wexford Wexford Harbour '96—Marshall *537*. Coast, rare.
20 Wicklow Arklow Head '81—Hart *371*.
21 Dublin Howth '00: rare—Colgan.
27 Mayo W. Inishturk '75—More *616*.
31 Louth Clogher Head '90—Butler *185*.
34 Dongl. E. Inishowen Head, Malin, Ballyshannon—*Fl. Don.*
38 Down Ballykinler '88—P. Rare—*Fl. NE.*
39 Antrim Portrush '98—Mrs. Swan. Rare—*Fl. NE.*
40 L'derry Magilligan '97—Mrs. Leebody. L. Neagh—*Fl. NE.*

Sandy places by the coast, chiefly in the east. Inland by Lough Neagh, the Kilkenny plant being probably casual.

Trifolium striatum L.

Census 9—East 6, Centre 0, West 3.

2 Kerry N. Kilfenora '94, and west of Ardfert—Scully.
3 Cork W. Glandore, J. Sullivan—*Cyb.* I.
4 Cork Mid Carrigaline '00 (Scully)—Phillips.
9 Clare Inishmore '90—Nowers & Wells *654*.
12 Wexford S. of Greenore, N. of Wexford Hbr. '97—Marshall *539*.
20 Wicklow Wicklow '00—C. Waterfall. Greystones '96—P.
21 Dublin Feltrim Hill '00: rare—Colgan.
31 Louth Summit of Clogher Head '37—Ball *93*.
39 Antrim Whitehead '66, G. C. Hyndman *spec.*—*Fl. NE.*

Very local, on the coast.

Trifolium scabrum L.

5 Cork E. Fanisk near Youghal '00—Phillips.
12 Wexford South of Carnivan Head '82—Hart *384*.
20 Wicklow Wicklow '00—C. Waterfall. Thence to Greystones f.
21 Dublin North Bull '00: rare—Colgan.

South-eastern coast only.

Trifolium glomeratum L.

12 Wexford Near Rosslare House '97—Marshall *539*, *541*.
20 Wicklow Wicklow '69—Moore *587*. A mile and a half N. of Wicklow '94, Scully—*Cyb.* II.

***Trifolium hybridum** L. Alsike Clover.

Divisions all, *except 9, 16, 24, 25, 29, 34, 35.* Appears established in the north-east, and is possibly so elsewhere.

Trifolium repens L. White or Dutch Clover.

Divisions all. Common.

Trifolium fragiferum L.

Census 11+(1)—East 8+(1) Centre 0, West 3.

1	Kerry S.	Castlegregory '94—Scully. Feohanagh '83—Hart *381*.
2	Kerry N.	Banna '92—Scully. Rather frequent.
(5	Cork E.	Two plants on roadside at Tivoli '99—Phillips.)
6	Waterfd.	Tramore abundant '99—P.
11	Kilkny.	New Ross '00—Phillips. Granny '98—P.
12	Wexford	Alderton '89—B. & G. *101*. Barrow estuary frequent.
13	Carlow	Leighlinbridge and mouth of Polmounty River '98—P.
20	Wicklow	Kilcoole '95—P.
21	Dublin	Hazelhatch '93—Colgan *207*. Frequent on coast.
22	Meath	Laytown and Mornington '96—P.
28	Sligo	Drumcliff '97—P.
31	Louth	Queensborough and Clogher Head '96—P.

Rare and local, chiefly on the east coast. Absent from Ulster. Occurs inland in Carlow and Dublin only.

***Trifolium agrarium** L.

Census 7—East 4, Centre 1, West 2.

10	Tipp. N.	Youghal Bay on Lough Derg '99—P.
11	Kilkny.	Thomastown '98—P.
12	Wexford	Courtown '93—Mrs. Tatlow!
17	Galw.NE.	Knockmae '00—P.
20	Wicklow	Kilmacanoge '94—P.
34	Dongl. E.	North of Kilderry, casual—*Fl. Don.*
38	Down	Drumbo '97—Davies *260*.

An introduced species, but spreading beyond the limits of cultivation in some of the above stations, and will probably become naturalized, as in England.

Trifolium procumbens L. Hop Trefoil.

Divisions all, *except 29 Leitrim*, where it, no doubt, will be found. Frequent.

Trifolium dubium Sibth. (*T. minus* Smith.) Shamrock.

Divisions all. Common.

Trifolium filiforme L.

Census 13—East 6, Centre 2, West 5.

1	Kerry S.	Kenmare '89—Scully.
2	Kerry N.	Rahaneen '92: rare—Scully.
4	Cork Mid	Currabinny '00 (Scully)—Phillips.
5	Cork E.	Youghal, Miss A. Ball—*Hb.* S. & A. M.!
7	Tipp. S.	Fethard '00—Phillips.
9	Clare	In Co. Clare, *Hb.* D. Moore—*Cyb.* II.
12	Wexford	Carnsore, Rosslare '97—Marshall *539*. †Kilmanock.
14	Queen's	By Erkina River above Durrow '98—P.
16	Galw. W.	Leenane '35—Babington *51*.
19	Kildare	Curragh '97, and near Ballymore '00—P.
20	Wicklow	Wicklow '00—C. Waterfall. Greystones—P. Arklow.
21	Dublin	St. Anne's at Clontarf—*Fl. Howth* '87.
35	Dongl. W.	‡Glenalla House—*Fl. Don.*
37	Armagh	Tynan Abbey '89—B.N.F.C. *117*.

In some cases believed to have been originally introduced with grass-seed.

Anthyllis Vulneraria L. Lady's Finger.

Divisions all, *except 29 Leitrim, 30 Cavan, 32 Monaghan*. Probably throughout the country, but local. Generally commoner on the coast than inland, and on the limestone than off it.

Lotus corniculatus L. Bird's-foot Trefoil.

Divisions all. Common.

‡*Lotus tenuis* Waldst. and Kit.

6	Waterfd.	Waterford '58, Babington *in Hb.*—*Cyb.* II.
12	Wexford	Near Alderton House, Miss Glascott—B. & M. *MS.*
21	Dublin	Howth, Vowell—*Fl. Howth* '87.
35	Dongl. W.	‡Rosapenna '96—Hart *401*.
(39	Antrim	Near Larne '69, Stewart: gone now—*Fl. NE.*)

Lotus uliginosus Schk.

Census 35—East 14, Centre 11, West 10.

Divisions all, *except 17 Galway NE., 19 Kildare, 25 Roscommon, 26 Mayo E., 28 Sligo.* A plant of very irregular distribution, but is abundant in parts of most of the divisions, and probably occurs in all. Commoner off the limestone than on it, and reaches its maximum in the north.

Astragalus Hypoglottis L. Purple Milk-Vetch.

9 Clare Inishmore '95—P. Inishmaan '35 (R. Ball)—Patterson *923*.

Aran Islands only.

Ornithopus perpusillus L. Bird's-foot.

3 Cork W. Goleen '96—Phillips.
12 Wexford Ballyconigar—Carroll '54 *192*.
21 Dublin Howth—*Fl. Howth* '87.

Vicia hirsuta Koch. Hairy Tare.

Census 30—East 15, Centre 6, West 9.

1 Kerry S. Parknasilla '92: rare—Scully.
2 Kerry N. Abbeydorney '94: rather rare—Scully.
3 Cork W. Skibbereen '97: rare—Phillips.
4 Cork Mid Donoughmore '96: frequent—Phillips.
5 Cork E. Midleton '00: common in the south—Phillips.
6 Waterfd. Near Clonmel—Miss S. Grubb '00.
7 Tipp. S. Cahir and Knocklofty '00—P.
8 Limrck. Askeaton '00—P. Foynes—Stewart *863*.
9 Clare Inchiquin L. '99, Castlepark—R. D. O'Brien.
11 Kilkny. Thomastown '98—P.
12 Wexford Arklow Head '81—Hart *371*. N. & S., r.—B. & M. *102*.
13 Carlow Marley dispensary near Borris—T. Hartley '00.
15 Galw. SE. Portumna '00—Phillips. Woodford—More *614*.
16 Galw. W. Near Clonbur '95—M. & S. *545*.
19 Kildare Curragh '97—P.
20 Wicklow Wicklow '97—P. About Bray, Barrington—*Guide* '78.
21 Dublin Near Rush '94: rare—Colgan.
22 Meath Ardtranan '48, Hb. Dr. Steele—*Hb.* S. & A. M.
23 Westmth. †Knock Drin, rare—Levinge '94 *484*.

26 Mayo E. Near Ballinrobe '94—Mrs. Persse!
28 Sligo Ballysadare '00—P.
31 Louth Ardee '00—Mrs. Swan. Frequent.
32 Monaghn. Iniskeen and Creeve Lough '00—P.
33 Ferman. Inishfree and Long I. on Lower L. Erne '92—P. *691*.
34 Dongl. E. Near Malin '98—Hart *405*. ‡Inishowen f.—*Fl. Don.*
35 Dongl. W. ‡Fanet, Ramelton, Rathmullan—*Fl. Don.*
37 Armagh Frequent '92—P.
38 Down Holywood '00—P. Frequent—*Fl. NE.*
39 Antrim Murlough Bay '00—Mrs. Swan. Frequent—*Fl. NE.*
40 L'derry Bellarena '98—Mrs. Leebody. Frequent—*Fl. NE.*

Rare except in the north-east, and sometimes in suspicious situations.

†**Vicia tetrasperma** Mœnch. Smooth Tare.

Census 6—East 5, Centre 1, West 0.

4 Cork Mid Kinsale junction, &c.—Allin *Fl.* '83. †Rare—Phillips.
5 Cork E. Ballyvodock '00—Phillips.
21 Dublin Knockmaroon '95 and Skerries '94—Colgan.
22 Meath Liscaton—*Ir. Fl.* '33. Ann's Brook—Murphy *629*.
23 Westmth ‡Knock Drin rare—Levinge '94 *484*. Mullingar—*Cyb.* I.
38 Down *Giant's Ring, C. Dickson—*Fl. NE.*

Seems established in Dublin (Knockmaroon), but hardly deserves inclusion in the Irish list.

Vicia Cracca L. Tufted Vetch.

Divisions all. Common.

Vicia Orobus DC. Bitter Vetch.

Census 4—East 1, Centre 1, West 2.

16 Galw. W. Bilberry Island on L. Corrib '97, Miss Jackson—*Cyb.* II. East only, very rare.
17 Galw. NE. Castle Lambert and Coolaran '99—Mrs. Joyce! Cregmore '91, Miss N. P. Decie.
18 King's Wood within four miles of Cloughjordan, R. Hodgens—*Fl. Hib.* '36.
39 Antrim Sallagh Braes '82, Stewart—*Fl. NE.*

The Down record (Ray's *Synopsis* 1696) is more than doubtful.

Vicia sylvatica L. Wood Vetch.

Census 22—East 11, Centre 3, West 8.

2	Kerry N.	Killarney '99—Scully.
3	Cork W.	Near Bantry—Drummond '19 *287*.
4	Cork Mid	Ballybrittain, *Hb.* Chandlee—*Cyb.* II.
5	Cork E.	Blackwater below Fermoy—Power *Fl.* '45.
6	Waterfd.	Ballyvoyle Head and Mine Head '82—Hart *384*.
8	Limrck.	Ringmoylan wood '85-6—Stewart *863*.
9	Clare	South of Slieve Elva '95, O'Kelly—*Cyb.* II.
11	Kilkny.	Wilton, S. Madden—*Cyb.* I.
12	Wexford	Duffcarrick '81—Hart *371*.
16	Galw. W.	Doon, Prof. Melville—*Cyb.* I. Streamstown—*Ir. Fl.* '33.
20	Wicklow	Arklow Head '81—Hart *371*. Rockfield; Devil's glen.
21	Dublin	Glenasmole '94 : rare—Colgan.
26	Mayo E.	Near Houndswood, Miss Jackson—*Cyb.* II.
28	Sligo	Ben Bulben 1815, Templeton *Journal*—*Cyb.* II.
29	Leitrim	Glenade and Arroo Mountain '84—B. & V. *112*.
31	Louth	Carlingford '78—Stewart.
33	Ferman.	Ballinamallard '00—P. Frequent on Lower L. Erne.
34	Dongl. E.	Moville and Donegal—*Fl. Don.*
35	Dongl. W.	Throughout, rare : frequent on Donegal Bay—*Fl. Don.*
38	Down	Dundrum '98—P. Rare—*Fl. NE.*
39	Antrim	Fair Head '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Magilligan '97—Mrs. Leebody. Rare—*Fl. NE.*

Vicia sepium L. Bush Vetch.

Divisions all. Common.

Vicia angustifolia Roth.

Census 33—East 15, Centre 10, West 8.

1	Kerry S.	Kenmare '00 : frequent—Scully.
2	Kerry N.	Abbeydorney '99 : frequent—Scully.
3	Cork W.	Skibbereen '97 : frequent—Phillips.
4	Cork Mid	Donoughmore '96 : common—Phillips.
5	Cork E.	Little Island '00 : common—Phillips.
6	Waterfd.	South of Clonmel '97—P. Frequent throughout.
7	Tipp. S.	Cahir '00 : throughout, being common in the south—P.
8	Limrick.	Askeaton '00—P. Limerick ; Longpavement.

10	Tipp. N.	Dromineer '00—Phillips. Rapla '99—P.
11	Kilkny.	Kilkenny '97—P. Ballinlaw Ferry—B. & G. *100*.
12	Wexford	Courtown '97—P. Frequent on the coast.
13	Carlow	Goresbridge '99, Bagenalstown '97—P.
14	Queen's	Ballybrophy '00—Phillips.
15	Galw. SE.	Garryland '00—P.
16	Galw. W.	Inishbofin '75—More *616*.
19	Kildare	West of Baltinglass '99—P.
20	Wicklow	Woodenbridge and Shillelagh '99 : frequent—P.
21	Dublin	Sutton '95 : local—Colgan.
22	Meath	Trim '00—P.
24	Longfd.	Reynoldstown '99 : frequent—P.
26	Mayo E.	Ballinrobe '94—Mrs. Persse ! Clonbur '96—Marshall.
29	Leitrim	Leitrim '99—P.
30	Cavan	Slieve Glah '96, Drumhawnagh '00—P.
31	Louth	Killencoole '96—P.
32	Monaghn.	Newbliss '00—P.
33	Ferman.	Enniskillen '00—P. Inishmacsaint '92—P. *691*.
34	Dongl. E.	Leenane and near Urney—*Fl. Don.*
35	Dongl. W.	Lough Shannagh '98—Hart *405*.
36	Tyrone	By L. Neagh '96—Miss Knowles. Urney—*Fl. Don.*
37	Armagh	Armagh '92 : frequent throughout—P.
38	Down	Killyleagh '98—P. Frequent throughout—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Frequent throughout.
40	L'derry	Magilligan '97—Mrs. Leebody. Frequent on coast and Lough Neagh—*Fl. NE.*

The above records show the accepted idea that this plant is almost confined to the coast is misleading. It is tolerably evenly distributed over the country, being rather commoner in the east, and becoming rare and local on the west coast.

Vicia lathyroides L.

Census 6—East 5, Centre 0, West 1.

20	Wicklow	Arklow '94—Scully *833*.
21	Dublin	Baldoyle '00—P. Very rare—Colgan.
34	Dongl. E.	Dunaff Head '98—Hart *405*. Stroove—*Fl. Don.*
38	Down	Ballymacormick Point '86—P. North half of coast, r.
39	Antrim	Ballycastle '82 [Stewart]—*Fl. NE.* Very rare.
40	L'derry	Magilligan '94—Mrs. Leebody.

Lathyrus pratensis L. Meadow Vetchling.

Divisions all. Common.

Lathyrus palustris L.

Census 9+(2)—East 3+(1), Centre 5+(1), West 1.

15 Galw. SE. Portumna '98—P.
20 Wicklow Murrough, D. Moore—*Cyb.* I. Dunganstown—*525*.
22 Meath Lough Sheelin '96—P.
23 Westmth. L. Iron '99, Athlone—P. L. Owel—*484*. Temple I.
24 Longfd. R. Inny below Ballymahon '00—P.
25 Roscomn. Clooneigh R. '97—T. A. Mapother! L. Key, Athlone—P.
30 Cavan By Lough Erne—Moore '59 *573*.
33 Ferman. Common near Belleisle House '81-2—Barrington *108*.
(36 Tyrone Islet in L. Neagh nr. Maghery—*Fl. Ulst.* Extinct.)
37 Armagh Closet River '92—P. West of Lagan Canal—*Cyb.* II.
(39 Antrim Several stations on L. Neagh till about 1840—*Fl. NE.*)

Drainage has nearly extinguished this plant on Lough Neagh. Elsewhere, its stations lie in the basins of the Shannon and Erne, with two outliers on the Wicklow coast.

Lathyrus maritimus Bigel. Sea Pea.

(1 Kerry S. Castlemaine Bay, last seen in 1845—see *Cyb.* II. Probably extinct.)

Lathyrus macrorrhizus Wimm. Heath Pea.

Census 36—East 14, Centre 11, West 11.

Divisions all, *except 22 Meath, 23 Westmeath, 24 Longford, 29 Leitrim*. Probably universal. Though distinctly calcifuge, it frequently occurs on the limestone. Frequent generally.

Prunus spinosa L. Blackthorn; Sloe.

Divisions all. Common.

**Prunus insititia* L. Bullace.

Census 28+(1)—East 12, Centre 8, West 8+(1).

1 Kerry S. *Kenmare '99: rare—Scully.
2 Kerry N. *Listowel '99: rare—Scully.
3 Cork W. †Skibbereen '96—Phillips.

4 Cork Mid †Coachford '97 : rare—Phillips.
5 Cork E. Rathcooney '98 : frequent—Phillips.
6 Waterfd. Near Carrickbeg '00—Phillips.
7 Tipp. S. Cahir and Knocklofty '00—P.
8 Limrck. Limerick, Lough Gur, Doon, '00—P.
(9 Clare? Inishmore, L. Ogilby—*Cyb.* I. Not seen since.)
10 Tipp. N. Roscrea '00—Phillips. Nenagh district c.—P.
11 Kilkny. Ballinalina, S. Madden—*Cyb.* I.
16 Galw. W. Bilberry Island in Lough Corrib—Wade 1804 *902*.
18 King's Clara '99—P.
19 Kildare Carbury '96—P.
21 Dublin Santry wood—*Ir. Fl.* '33. Near Merrion—*Fl. Hib.* '36.
22 Meath Navan '00, Laytown '96—P.
23 Westmth. Knock Drin '95—Levinge *486*.
28 Sligo Sligo '97—P.
29 Leitrim Garadice Lough '00—P.
31 Louth Collon '00—P.
32 Monaghn. Newbliss '00—P.
33 Ferman. Drumlyon House, Lakeview, &c. '00—West.
34 Dongl. E. *Buncrana and Ballyshannon—*Fl. Don.*
35 Dongl. W. *Fanet and Donegal—*Fl. Don.*
36 Tyrone Omagh '96—Miss Knowles. Artigarvan—Sigerson *838*.
37 Armagh Frequent throughout '92—P.
38 Down Holywood '00—P. Frequent—*Fl. NE.*
39 Antrim Ballycastle '97—P. Frequent—*Fl. NE.*
40 L'derry Ballynascreen, D. Moore, &c. : frequent—*Fl. NE.*

Chiefly in hedges, but often self-sown. Naturalized in the NE.—S. & P. *874*.

Prunus Avium L. Wild Cherry.

Census 27—East 14, Centre 9, West 4.

1 Kerry S. Kenmare '98—P.
2 Kerry N. Killarney, D. Moore—*Cyb.* I.
4 Cork Mid †Rochestown '98 : rare—Phillips.
5 Cork E. Near Belvelly '96 : frequent—Phillips.
7 Tipp. S. Slievenaman, native, '00 : †Fethard '98—P.
8 Limrck. Bilboa river glen, native, '00—P.
11 Kilkny. Thomastown '98, looking native—P. Frequent.
12 Wexford Glen at Courtown '97—P.
13 Carlow Borris, Ballintemple, Aghade, '99—P.

14	Queen's	†Mountrath '97, north of Graigue '98—P.
19	Kildare	Hills north of Kildare '98—P.
20	Wicklow	Avondale '99—P. Frequent.
21	Dublin	Near Carrickmines '95 : rare—Colgan.
22	Meath	†Beauparc '96, ‡Navan, ‡Laytown—P.
23	Westmth.	Knock Eyon looking wild '99—P. †Knock Drin—*484*.
25	Roscomn.	†Near Athlone '98—P.
28	Sligo	Co. Sligo, J. Wynne—*Cyb.* I.
30	Cavan	†Cavan '96—P.
31	Louth	†Ballymascanlan '00, †Boyne Obelisk '96—P.
32	Monaghn.	†Creeve Lough and †Lough Avaghon '00—P.
33	Ferman.	Florencecourt, native ? '00—P. Frequent.
34	Dongl. E.	†Throughout frequent—*Fl. Don.*
35	Dongl. W.	Lough Fern "looking native" : local—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles. Holyhill—Sigerson *838*.
37	Armagh	Frequent '92—P.
38	Down	Dundonald looking native '00—P. Native, f.—*Fl. NE.*
39	Antrim	Ballymena '00—Miss Knowles. Native, f.—*Fl. NE.*
40	L'derry	Eglinton '98—Mrs. Leebody. Native, f.—*Fl. NE.*

Appears native in upland glens in the north, and in Tipperary and Limerick, and at least naturalized in Kilkenny, Carlow, Wicklow, Westmeath. Probably an original native, whose habitats have been disturbed by cultivation.

‡**Prunus Cerasus** L. Dwarf Cherry.

Census 36—East 15, Centre 12, West 9.

1	Kerry S.	*Kenmare '98—P.
3	Cork W.	South Cork, J. Sullivan—*Cyb.* I.
4	Cork Mid	Leemount and Blarney—Power *Fl.* '45.
5	Cork E.	Fermoy, T. Chandlee—*Cyb.* I.
6	Waterfd.	Dungarvan '99, Bunmahon, Clonmel, Mt. Congreve—P.
7	Tipp. S.	Slievenaman '00 : frequent—P.
8	Limrck.	Doon '00 : common in the north—P.
10	Tipp. N.	Barracurragh '98, Nenagh, Cloughjordan, Thurles—P.
11	Kilkny.	Near Lismaine House '99 : frequent—P.
12	Wexford	Churchtown, Gorey, '97—Marshall *539*. Ballyhyland.
13	Carlow	Milford '99 : frequent—P.
14	Queen's	Mountrath '97 : frequent—P.
15	Galw. SE.	Ardrahan, Dalystown, and Gort, '00—P.
16	Galw. W.	Clonbur '95—M. & S. *545*.

18	King's	Clara '99 : frequent—P.
19	Kildare	Kildare '97 : frequent—P.
20	Wicklow	Greystones '94 : local—P.
21	Dublin	Santry '95 : rare—Colgan.
22	Meath	Hill of Down '00—P.
23	Westmth.	Knock Drin '95—Levinge *486*. Killinure L. '98—P.
25	Roscomn.	Kilteevan '97, Mapother—*Hb.* S. & A. M.! Rare—P.
26	Mayo E.	Carrowkeribly Lough and Ballyhaunis '00—P.
27	Mayo W.	Achill Island '99—Marshall. Frequent.
28	Sligo	Lough Arrow, Sligo, Lough Gill, '97—P.
29	Leitrim	Garadice Lough '00, and frequent in north—P.
30	Cavan	Slieve Glah '96, Scrabby '00—P.
31	Louth	Dunleer '96, Killencoole, Carlingford—P.
32	Monaghn.	Creeve Lough '00—P. Frequent.
33	Ferman.	Castle Coole '99 : widespread—P.
34	Dongl. E.	In the south-west—Hart '00.
35	Dongl. W.	In the south-west—Hart '00.
36	Tyrone	Sperrin Mountains '92—P.
37	Armagh	Loughgall : frequent throughout, '92—P.
38	Down	Crossgar '00 : frequent—P.
39	Antrim	Ballycastle '97—P. Frequent—S. & P. *874*.
40	L'derry	Draperstown '92—P. Frequent ?

A plant of frequent occurrence throughout Ireland. Generally in hedges, but often self-sown (or bird-sown) on rough banks. Probably introduced originally.

Prunus Padus L. Bird Cherry.

Census 26—East 7, Centre 9, West 10.

1	Kerry S.	*Kenmare in hedges '99—Scully.
2	Kerry N.	*Abbeydorney in hedges '99—Scully.
3	Cork W.	Near Bandon '00—Mrs. Swan.
4	Cork Mid	*Carrigaline (Alexander)—Power *Fl.* '45.
5	Cork E.	*Near Castletownroche, &c.—Allin *Fl.* '83.
8	Limrck.	‡Glenstal (C. B. Barrington)—Hart '81 *369*.
9	Clare	Bridgetown, '00—R. D. O'Brien.
10	Tipp. N.	†North base of Keeper Hill '99—P.
12	Wexford	*Ballyhyland frequent, and Chapel—B. & M. *MS.*
14	Queen's	Woods at Maryborough '97 : †elsewhere—P.
15	Galw. SE.	Woodford '98—P. Roxborough hills—Mrs. Joyce.
17	Galw. NE.	Clonbrock, Donamon, '97—P. Ballinasloe—*Cyb.* I.

18 King's Clonad wood '96—P.
22 Meath Ross Castle '85—P.
23 Westmth. †Knock Drin—Levinge '94 *484*.
25 Roscomn. Kilteevan '98—T. A. Mapother! Mote Park '97—P.
28 Sligo By Lough Achree '96—Colgan.
29 Leitrim Lurganboy '99—P. Larkfield, Wynne—*Cyb.* I.
32 Monaghn. Cornacassa and Monaghan '00—W. de V. Kane.
33 Ferman. Cooneen, W. J. Browne—*Cyb.* II.
34 Dongl. E. River Finn c., &c.: centre and north—*Fl. Don.*
35 Dongl. W. Throughout sparingly—*Fl. Don.*
36 Tyrone Omagh '96—Miss Knowles. Favour Royal—Hart *392*.
38 Down Tullycairn, Dickson & Corry—*Fl. NE.*
39 Antrim Skerry '99—Miss Knowles. Rare—*Fl. NE.*
40 L'derry Near Limavady, D. Moore: rare—*Fl. NE.*

Native in most of its stations, which generally lie in old woods and upland river-glens. Absent as a native from the southern uplands, and rare on the Central Plain.

Spiræa Ulmaria L. Meadow-sweet.

Divisions all. Abundant.

Spiræa Filipendula L. Dropwort.

9 Clare Black Head '99—Miss Knowles. Boston—*Cyb.* II. Glencolumbkill abundant—Foot *324*.
15 Galw. SE. Abundant from Gort to Burren '00—P. Portumna '44—Moore *563*.

Rubus Idæus L. Raspberry.

Divisions all. Frequent.

Rubus fruticosus L. Bramble; Blackberry.

Divisions all. Abundant.

[The arrangement and nomenclature of the Fruticose segregates follow Moyle Rogers's *Handbook of British Rubi*, 1900. Mr. Rogers distinguishes in his book the Irish counties from which he has seen specimens, those which are recorded on other reliable authority, and those from which, in the present state of our knowledge, he considers it is desirable to have confirmation. Census numbers are omitted below, since the country has been so irregularly worked for *Rubi* that they would have no significance.]

Rubus fissus Lindl.

3	Cork W.	Castletownsend '97 : frequent in the south—Phillips.
4	Cork Mid	Ballinhassig '97 : rare—Phillips.
23	Westmth.	Drinmore—Levinge '94 *484*.
32	Monaghn.	Rossmore '00—Waddell.
34	Dongl. E.	Finn River and Pettigoe—*Fl. Don.*
38	Down	Near Saintfield, Stewart—*Fl. NE.*
40	L'derry	Near Londonderry, D. Moore—*Cyb.* I.

Rubus suberectus Anders.

3	Cork W.	Millstreet mountains (Carroll)—Allin *Fl.* '83.
17	Galw. NE.	Near Headford, Shuttleworth—*Fl. Hib.* '36.
23	Westmth.	Knock Drin—Levinge '94 *484*.
34	Dongl. E.	Frequent in north and south—*Fl. Don.*
35	Dongl. W.	Probably frequent throughout—*Fl. Don.*
38	Down	Castlewellan Lake '93, Stewart—B.E.C. '93.
40	L'derry	Limavady, D. Moore—*Cyb.* I.

Rubus Rogersii Linton.

38	Down	Gillhall '96, Saintfield '94, Waddell—W.B.E.C. '96–7.
39	Antrim	Toome '98—Druce *285*.
40	L'derry	Toome '98—Druce *285*.

Rubus plicatus Wh. & N.

3	Cork W.	Ballydehob '96 : frequent in south—Phillips.
4	Cork Mid	East of Bandon '98 : rare—Phillips.
12	Wexford	Macmine Castle '97—Marshall *539*.
13	Carlow	Near Graiguenamanagh '00—Phillips.
15	Galw. SE.	Lough Derg below Woodford '98—P.
16	Galw. W.	South of Lough Mask '95—M. & S. *545*.
17	Galw. NE.	Clonbrock '96—P.
22	Meath	Co. Meath, D. Moore— *Cyb.* I.
23	Westmth.	Drinmore and Crooked Wood '95—Levinge *486*.
26	Mayo E.	South of Lough Mask '95—M. & S. *545*.
27	Mayo W.	Mallaranny district common '99—Marshall.
28	Sligo	Lough Arrow '97—P.
32	Monaghn.	Kilmore Lake and Killy Lough '00—Waddell.
33	Ferman.	White Island (var. *hemistemon*) '81–2—Barrington *108*.
34	Dongl. E.	Frequent in Inishowen—*Fl. Don.*

35 Dongl. W. Magherawarden and Knockalla (var. *hemistemon*) '98—Hart *405*. Glen Lough—*Fl. Don.*
36 Tyrone Co. Tyrone '96—Miss Knowles.
37 Armagh Church Hill (var. *hemistemon*) '92—P.
38 Down Anacloan '96, Waddell—W.B.E.C. '96–7.
40 L'derry Lough Neagh [Toome] '98—Druce *286*. Clady and Kilrea, D.Moore—*Fl. NE.*

Probably common throughout Ireland.

Rubus nitidus Wh. & N.

23 Westmth. Crooked Wood (*R. opacus* Focke) '95—Levinge *486*.
29 Leitrim SE. corner of Lough Allen '84—Stewart *859*.
38 Down Altnadua Lake ['89]—S. & P. *873*.

Rubus affinis Wh. & N.

2 Kerry N. Killarney, Babington—*Cyb.* I.

Rubus cariensis Genev.

12 Wexford Near Wexford '96—Marshall *537*.

Rubus carpinifolius Wh. & N.

1 Kerry S. Derrynane, Babington—*Cyb.* I.
2 Kerry N. Torc Mountain, Babington—*Cyb.* I.
16 Galw. W. Inishbofin '75—More *616*. Maam '35—Babington *51*.
21 Dublin Howth, *Hb.* J. Ball—Focke '91 *320*.
23 Westmth. Crooked Wood '95—Levinge *486*.
34 Dongl. E. Inishowen frequent—*Fl. Don.*
35 Dongl. W. Owencarrow River: frequent in the north—*Fl. Don.*
38 Down Newcastle ['89]—S. & P. *873*. Frequent—*Fl. NE.* &c.
39 Antrim Rathlin ['81], Stewart: frequent—*Fl. NE.*

Rubus incurvatus Bab.

12 Wexford Near Wexford '96—Marshall *537*.
16 Galw. W. Clonbur '96—Marshall *537*.
23 Westmth. Knock Drin '94—Levinge *485*. Crooked Wood—*503*.
34 Dongl. E. Glengad Head and northwards—*Fl. Don.*
40 L'derry Toome Bridge '98—Druce *286*.

Rubus Lindleianus Lees.

11 Kilkny. Ferrybank '95—M. & S. *545*.
16 Galw. W. South of Lough Mask '95—M. & S. *545*.
23 Westmth. Knock Ross—Levinge '94 *484*.
26 Mayo E. South of Lough Mask '95—M. & S. *545*.
32 Monaghn. Newmills and Tydavnet '00—Waddell.
37 Armagh Lough Gilly '99—Druce *285*. Frequent.
38 Down Aghaderg '96, Lett—W.B.E.C. '96–7.
39 Antrim Glendun '94—Brenan *167*. Glenariff—Shoolbred *837*.
40 L'derry Ballinderry '94—Brenan *167*.

Evidently common in Ireland.

Rubus erythrinus Genev.

16 Galw. W. East of Clonbur '95—Marshall.
23 Westmth. Knock Drin '94—Levinge *485*.
26 Mayo E. South of Lough Mask '95—M. & S. *545*.
40 L'derry Ballinderry '94—Brenan *167*.

Rubus rhamnifolius Wh. & N.

12 Wexford Rosslare '96—Marshall *537*.
16 Galw. W. Maam, Clonbur, '95—M. & S. *545*. L. Inagh—*320*.
21 Dublin Clontarf and Balbriggan '93—P. *715*.
22 Meath Mornington '93—P. *715*.
23 Westmth. Knock Drin '94—Levinge *485*.
34 Dongl. E. Inishowen frequent—*Fl. Don*.
35 Dongl. W. West Kilmacrenan frequent—*Fl. Don*.
37 Armagh Near Armagh '92—P.
38 Down Aghaderg '96, Lett—W.B.E.C. '96–7. Frequent.
39 Antrim Glenariff '93—Shoolbred *837*. Frequent.
40 L'derry Magilligan, *Hb.* J. Ball—Focke '91 *320*.

Common in the north, and probably elsewhere.

Rubus nemoralis P. J. Muell.

38 Down White Water, Donard Lodge, and (var. *glabratus* Bab.) Ghann R. '89–'90—S. & P. *873*.

Rubus dumnoniensis Bab.

11 Kilkny Ferrybank '95—M. & S. *545*.
16 Galw. W. Maam '95—M. & S. *545*.
27 Mayo W. Mallaranny '99—Marshall.

Rubus pulcherrimus Neum.

12	Wexford	Rosslare '96—Marshall *537*.
16	Galw. W.	Maam and Clonbur '95—M. & S. *545*.
20	Wicklow	Lough Dan '93—P. *715*.
21	Dublin	Glenasmole and Balbriggan '93—P. *715*.
22	Meath	Mornington '93—P. *715*.
26	Mayo E.	Cong '95—M. & S. *545*.
27	Mayo W.	Mallaranny, Achill Sound, Westport, '99—Marshall.
32	Monaghn.	Bessmount and Rossmore '00—Waddell.
37	Armagh	L. Gilly '98—Druce *286*. Ballymore (Lett)—P. *701*.
38	Down	Saintfield '95, Waddell—W.B.E.C. '95–6. Frequent.
39	Antrim	Cushendall, &c., '96, Bailey—B.E.C. '96. Frequent.
40	L'derry	Toome '98—Druce *285*. Ballinderry '94—Brenan *167*.

Evidently abundant in Ireland. The Westmeath record (Rogers: *Brit. Rubi*) is not quite certain.

Rubus villicaulis Koehl.

2	Kerry N.	Killarney, Babington—*Cyb.* I.
6	Waterfd.	Waterford, Babington—*Cyb.* I.
9	Clare	Sixmilebridge '85–6—Stewart *863*.
16	Galw. W.	Inishbofin '75—More *616*. Clonbur, Cong f., '96 (*Selmeri*)—Marshall *537*. Maam, Babington—*Cyb.* I.
22	Meath	Co. Meath, D. Moore—*Cyb.* I.
23	Westmth.	L. Deravaragh and Ballynegall '95 (*Selmeri*)—Levinge *486*. Knock Drin (*rhombifolius*), Linton—*Cyb.* II.
26	Mayo E.	Clonbur and Cong f. '96 (*Selmeri*)—Marshall *537*.
27	Mayo W.	Newport (*Selmeri*) and Mallaranny '99 (*Selmeri* and *rhombifolius*)—Marshall.
29	Leitrim	Lough Allen '84—Stewart *859*.
30	Cavan	Lough Ramor '96—P.
32	Monaghn.	Rossmore, Clontibret, Ballinode, '00 (all *Selmeri*)—Waddell.
34	Dongl. E.	Glengad Head, &c. (type); Pettigoe (*calvatus* Blox.)—*Fl. Don.*
35	Dongl. W.	Carrick (*Selmeri*) ['91], Hanbury—*Cyb.* II.
37	Armagh	L. Gilly (*Selmeri*) '99—Druce *285*. Frequent (type and *Selmeri*).
38	Down	Aghaderg (*Selmeri*) '96, Lett—W.B.E.C. '96–7. Frequent (type and *Selmeri*).

39 Antrim Glenarm (*Selmeri*)—Druce *285*. Frequent (type and *Selmeri*).

40 L'derry Ballinderry '94—Brenan *167*. Toome '98 (type and *Selmeri*)—Druce *284*, *285*.

The aggregate is common, and *R. Selmeri* Lindeb. appears to be more abundant than the type.

Rubus gratus Focke.

37 Armagh Ballymore '94, Lett—*Cyb.* II.

39 Antrim Glendun (Lett)—S. & P. *874*.

Rubus argentatus P. J. Muell.

26 Mayo E. Cong '95—M & S. *545*.

Rubus rusticanus Merc. (*R. discolor* Wh. & N.)

Divisions all. Abundant.

Rubus pubescens Weihe.

38 Down Near Saintfield (Waddell)—S. & P. *874*.

Rubus silvaticus Wh. & N.

16 Galw. W. Maam '95—M. & S. *545*.

20 Wicklow Lough Dan '93—P. *715*.

21 Dublin Howth '93—P. *715*.

38 Down Saintfield '94, Waddell—W.B.E.C. '94–5. Near Clonallen (Lett)—S. & P. *874*.

Rubus myricæ Focke var. *hesperius* Rogers.

16 Galw. W. Oughterard, Maam, Clonbur, common, '95–6 (Marshall)—Rogers *815*.

26 Mayo E. Cong, common, '95–6 (Marshall)—Rogers *815*.

Rubus macrophyllus Wh. & N.

1 Kerry S. Kenmare '90—Druce *284*.

2 Kerry N. Killarney, Babington—*Cyb.* I.

3 Cork W. Inchigeela (*Schlechtendalii*) '97, Ballydehob—Phillips. Glengariff—Druce *284*.

4 Cork Mid Crosshaven '00—Phillips.

5 Cork E. Whitegate (type and *Schlechtendalii*) '97—Phillips.

9	Clare	Doonbeg '85–6—Stewart *863*.
12	Wexford	Near Wexford (*Schlechtendalii*) '96—Marshall *537*.
14	Queen's	Maryborough '93—P. *715*.
18	King's	Portarlington '93—P. *715*.
20	Wicklow	Luggela (type) '93—P. *715*. Var. *Schlechtendalii* frequent, *amplificatus* rare.
21	Dublin	Howth '93—P. *715*. Var. *Schlechtendalii* frequent.
23	Westmth.	Knock Ross (*Schlechtendalii* and *amplificatus*)—Levinge '94 *484*.
29	Leitrim	Lough Allen '84—Stewart *859*.
30	Cavan	Lough Ramor (*Schlechtendalii*) '96—P.
32	Monaghn.	Rossmore '00—Waddell.
34	Dongl. E.	Glengad Head—*Fl. Don.*
35	Dongl. W.	Killybegs, Marshall—*Fl. Don.*
37	Armagh	Newry (*Schlechtendalii*) '92—P.
38	Down	Saintfield (Waddell)—S. & P. *874*. Frequent (type and *Schlechtendalii*).
39	Antrim	Between Glenarm and Glenariff '98—Druce *286*. Frequent (type and *Schlechtendalii*); *amplificatus* rare.
40	L'derry.	Between Magilligan and Umbra '96, C. Bailey—B.E.C. '96. Frequent.

R. Schlechtendalii Weihe appears to be as common as the type: both probably occur throughout Ireland.

Rubus Salteri Bab.

16	Galw. W.	Cromlyn ['95], E. F. Linton—*Cyb.* II.
37	Armagh	Near Newry '92—P.
38	Down	Shrigley, Stewart—*Fl. NE.*

Rubus Sprengelii Weihe.

5	Cork E.	Near Mitchelstown '97—Phillips.
11	Kilkny.	Ferrybank '95—M. & S. *545*.
12	Wexford	Two miles west of Wexford '96—Marshall *537*.

Rubus micans Gren. & Godr.

21	Dublin	Howth '93—P. *718*.
40	L'derry	Ballinderry '94—Brenan *167*.

Rubus hirtifolius Muell & Wirtg.

9	Clare	Inishmore (*mollissimus*) '95—P. *740*.
11	Kilkny.	Ferrybank, common, (*danicus*) '95—M. & S. *545*.
12	Wexford	Churchtown, Wexford f., (*danicus*) '97—Marshall *537*.
10	Galw. W.	Near Cong '96—Marshall *537*. Inishmacdara (*mollissimus*) '95—P. *740*.
23	Westmth.	Knock Drin (type and *danicus*) '95—Levinge *486*.
26	Mayo E.	South of Lough Mask (*danicus*) '96—Marshall *537*.
27	Mayo W.	Mallaranny (type and *mollissimus*) '99—Marshall.
29	Leitrim	Lough Allen, common, '84—Stewart *859*.
38	Down	Saintfield (Waddell); Aghaderg (Lett) (both *mollissimus*)—W. M. Rogers.
40	L'derry	Cross-road to Carnabridge and Portrush (*mollissimus*) '96, C. Bailey—B.E.C. '96.

Rubus iricus Rogers.

3	Cork W.	Ballydehob '96—Phillips.
5	Cork E.	Near Whitegate '97—Phillips.
16	Galw. W.	Common at Maam, Oughterard, Clonbur, '95–6 (Marshall)—Rogers *815*.
26	Mayo E.	Common at Cong '95–6 (Marshall)—Rogers *815*.
27	Mayo W.	Mallaranny and Newport '99—Marshall.

A form apparently endemic in Ireland.

Rubus pyramidalis Kalt.

12	Wexford	West of Wexford '96—Marshall *537*.
16	Galw. W.	Clonbur '95—M. & S. *545*.
19	Kildare	Monasterevan '93—P. *715*.
20	Wicklow	Lough Dan and Glendalough '93—P. *715*, *718*.
21	Dublin	Balbriggan, and frequent in the south, '93—P. *715*, *718*.
23	Westmth.	Knock Ross—Levinge '94 *484*.
26	Mayo E.	Lough Corrib near Cong '95—M. & S. *545*.
27	Mayo W.	Mallaranny '99—Marshall.
28	Sligo	Near Dromore West '96, Colgan—*Cyb.* II.
29	Leitrim	Drumahaire '99—P.
35	Dongl. W.	Carrick '91, Hanbury—*Fl. Don.*
37	Armagh	Ballymore (Lett), and Lurgan, '92—P. *701*.
38	Down	Tollymore Park ['90]—S. & P. *873*. Frequent.
39	Antrim	Glenariff '93—Shoolbred *837*. And about Belfast.

Evidently common in Ireland.

Rubus leucostachys Schleich.

2	Kerry N.	Killarney, Babington—*Cyb.* I.
3	Cork W.	Schull '96—Phillips.
5	Cork E.	Whitegate '97—Phillips. Fermoy (Chandlee)—Allin *Fl.*
9	Clare	Between Kilrush and Moyne Point '85-6—Stewart *863*.
11	Kilkny.	Common at Ferrybank '95—M. & S. *545*.
12	Wexford	Wexford '96—Marshall.
14	Queen's	Maryborough and Portarlington '93—P. *715*.
16	Galw. W.	Clonbur, Maam, Oughterard, '95—M. & S. *545*. *R. leucanthemus* at Clonbur '96—Marshall.
18	King's	Near Portarlington '93—P. *715*.
19	Kildare	Monasterevan '93—P. *715*.
20	Wicklow	Enniskerry '93—P. *715*.
21	Dublin	Kelly's Glen '93—P. *715*.
23	Westmth.	Crooked Wood and Knock Ross '95—Levinge *486*.
26	Mayo E.	Clonbur, Cong, '95—M. & S. *545*. *R. leucanthemus* at Clonbur '96—Marshall.
28	Sligo	Ox Mountains '96 (Colgan)—W. M. Rogers.
29	Leitrim	Lough Allen and Lough Scur '84—Stewart *859*.
30	Cavan	Lough Oughter '96—P.
35	Dongl. W.	Carrick—*Fl. Don.*
37	Armagh	Near Lurgan '92—P.
38	Down	Dundonald, R. Tate: frequent?—*Fl. NE.*
39	Antrim	Glenariff '93—Shoolbred *837*. Frequent.
40	L'derry	Ballinderry '94—Brenan *167*.

Doubtless common throughout Ireland.

Rubus lasioclados Focke var. *angustifolius* Rogers.

12	Wexford	Gorey and plentiful near Wexford '97—Marshall.

Rubus criniger Linton.

38	Down	Loughbricland (Lett)—S. & P. *874*.

Rubus Boræanus Genev.

38	Down	Aghaderg, Lett—*Cyb.* II.

Rubus cinerosus Rogers.

16	Galw. W.	Near Clonbur '96—Marshall.
23	Westmth.	Knock Drin '95 (E. F. Linton)—W. M. Rogers.
26	Mayo E.	South of Cong '96—Marshall.

Rubus mucronatus Blox.

21	Dublin	Howth and Foxrock '93—P. *715*.
23	Westmth.	Knock Drin '94—Levinge *485*.
26	Mayo E.	Lough Corrib near Cong '95—M. & S. *545*.
36	Tyrone	Co. Tyrone '96—Miss Knowles.
37	Armagh	Near Armagh '92—P.
38	Down	Saintfield (Waddell)—S. & P. *874*.
39	Antrim	Cave Hill '98—Druce *286*. Whiterock—*Fl. NE.*
40	L'derry	By L. Neagh [Toome, '98] (Druce)—W. M. Rogers.

Rubus Gelertii Frider.

21	Dublin	Brackenstown, Colgan—*Cyb.* II.
38	Down	Loughbricland (var. *Lettii*) Lett—W.B.E.C. '99-'00.

Rubus anglosaxonicus Gelert.

37	Armagh	Tartaraghan and Newry '92—P.
39	Antrim	Glenarm '98—Druce *286*.

Rubus infestus Weihe.

21	Dublin	Ballybetagh, Colgan—*Cyb.* II.
40	L'derry	Cross-road to Carnabridge and Portrush '96, C. Bailey—B.E.C. '96.

Rubus Borreri Bell-Salt.

12	Wexford	Frequent near Wexford '96—Marshall *537*.
16	Galw. W.	Maam '95—M. & S. *545*.
21	Dublin	Slieve Thoul, Colgan—*Cyb.* II.
23	Westmth.	Crooked Wood (var. *dentatifolius*) '94 (E. F. Linton)—W. M. Rogers.
37	Armagh	Lough Gilly '98—Druce *286*. Near Newry '92—P.

Rubus Drejeri G. Jensen.

12	Wexford	Near Wexford (*Leyanus*) '96—Marshall *537*.
27	Mayo W.	Newport '99—Marshall.
37	Armagh	Ballymore (*Leyanus*) (Lett)—P. *701*.
38	Down	Saintfield ['94], Waddell; Aghaderg ['96], Lisnagade, Lett (all var. *hibernicus*)—Rogers: *Brit. Rubi.*
39	Antrim	Toome bridge (*Leyanus*) '98—Druce *286*.
40	L'derry	Toome bridge (*Leyanus*) '98—Druce *286*.

Var. *hibernicus* is not known elsewhere. *R. Leyanus* appears to be the prevailing variety.

Rubus radula Weihe.

2	Kerry N.	Muckross, A. Ley—*Cyb.* II.
21	Dublin	Walshestown and Ballyboghil (*echinatoides*), Colgan—*Cyb.* II.
23	Westmth.	Knock Drin (*echinatoides*) '95—Levinge *486*.
26	Mayo E.	South end of Lough Mask '96—Marshall *537*.
36	Tyrone	Co. Tyrone (*echinatoides*) '96—Miss Knowles.
37	Armagh	Tanderagee (*echinatoides*) (Lett)—W. M. Rogers.
38	Down	Tollymore Park '98—Druce *286*. Apparently frequent.
39	Antrim	Near Giant's Causeway '96, C. Bailey—B.E.C. '96. Frequent (type and *echinatoides*).
40	L'derry	Ballinderry '94—Brenan *167*.

Rubus echinatus Lindl.

20	Wicklow	Wicklow, Moore—*Cyb.* I. (as *R. rudis*).
21	Dublin	Walshestown '95, Colgan—*Cyb.* II. Balbriggan '93—P.
22	Meath	New Grange, Babington—*Cyb.* I. (as *R. rudis*).
37	Armagh	Markethill '98 (Druce)—W. M. Rogers.
39	Antrim	Glenariff, Glendun, Cave Hill, '93—Shoolbred *837*.

Rubus rudis Wh. & N.

16	Galw. W.	L. Corrib SW. of Cong '96 (Marshall)—W. M. Rogers.
38	Down	Loughbricland (Lett)—S. & P. *874*.

Rubus oigocladus Muell. & Lefv.

5	Cork E.	Mitchelstown '97—Phillips.
21	Dublin	Seecawn Mountain (*Newbouldii*) Colgan—*Cyb.* II.
23	Westmth.	Crooked Wood (*Newbouldii*) '95—Levinge *486*.
38	Down	Aghaderg (*Newbouldii*) '96, Lett—W.B.E.C. '96–7.
40	L'derry	Kilrea (*Newbouldii*), D. Moore—*Cyb.* I.

Rubus regillus A. Ley.

38	Down	Gillhall demesne ['96] Lett—Rogers: *Brit. Rubi.*

Rubus Babingtonii Bell-Salt.

16	Galw. W.	Between Clonbur and Mount Gable '95—M. & S. *545*.
38	Down	Ballintaggart, Lett—*Cyb.* II.

Rubus Bloxamii Lees.

16	Galw. W.	L. Corrib SW. of Cong, '96 (Marshall)—W. M. Rogers.
39	Antrim	Black Mountain—Babington: *Brit. Rubi.*

Rubus fuscus Wh. & N.

12 Wexford	Near Wexford (*obscurus*)—Marshall '99 *541*.
16 Galw. W.	Frequent about Clonbur and Cong '96—Marshall *537*.
21 Dublin	Howth and Balbriggan '93—P. *715*. Slieve Thoul (*macrostachys*), Colgan—*Cyb.* II.
23 Westmth.	Knock Ross (type and *macrostachys*) and Knock Drin—Levinge '94 *484*.
26 Mayo E.	Frequent about Clonbur and Cong '96—Marshall *537*.
38 Down	Aghaderg (Lett)—S. & P. *874*.

Rubus scaber Wh. & N.

16 Galw. W.	Clonbur and west of Cong '96—Marshall *537*.
20 Wicklow	Glendalough '93—P. *715*.
21 Dublin	Clontarf '93—P. *715*. Howth (Waddell)—P. *736*.
22 Meath	Mornington '93—P. *715*.
23 Westmth.	Crooked Wood, Knock Drin, &c. '95—Levinge *486*.
37 Armagh	Lurgan and Newry '92—P.
38 Down	Loughbricland (Lett)—S. & P. *874*.

Rubus thyrsiger Bab.

23 Westmth.	Knock Drin '95—Levinge *486*.

Rubus foliosus Wh. & N.

38 Down	Tollymore Park, Stewart—*Fl. NE.*
40 L'derry	Between Kilrea and Garvagh, D. Moore—*Cyb.* I.

Rubus rosaceus Wh. & N.

2 Kerry N.	Killarney, Babington—*Cyb.* I.
3 Cork W.	Glengariff (*hystrix*) '90—Druce *284*.
8 Limrck.	Rinekirk '85–6—Stewart *863*.
16 Galw. W.	Near Clonbur and Cong (*adornatus*), Marshall—*Cyb.* II.
21 Dublin	Kilakee River, Colgan—*Cyb.* II. Carrickmines, &c. (*hystrix*) '93—P. *715*.
23 Westmth.	Knock Drin (*hystrix*) '95—Linton *486*.
38 Down	Maralin (Lett)—S. & P. *874*.
39 Antrim	Glenariff (*hystrix*) '93—Schoolbred *837*.

Rubus Koehleri Wh. & N.

2 Kerry N.	Killarney (type and *pallidus*) Babington—*Cyb.* I.
5 Cork W.	Fermoy (T. Chandlee)—Allin *Fl.* '83.
8 Limrck.	Foynes '85–6—Stewart *863*.

9	Clare	Ballycar '85–6—Stewart *863*.
16	Galw. W.	Oughterard, &c. (type); south of Lough Mask (*cognatus*) '95—M. & S. *545*.
21	Dublin	Kelly's Glen '93—P. *718*.
26	Mayo E.	South of Lough Mask (*cognatus*) '95—M. & S. *545*.
30	Cavan	Frequent in the north-west '81—Stewart *854*.
32	Monaghn.	Kilmore Lough '00—Waddell.
33	Ferman.	Frequent in the south-west '81—Stewart *854*.
37	Armagh	Tanderagee (type, *pallidus* Bab., and *dasyphyllus*), Lett —*Cyb.* II. and W. M. Rogers.
38	Down	Near Aghaderg (*cognatus* and *dasyphyllus*) '96–'99, Lett—W.B.E.C. Type and *pallidus* frequent.
39	Antrim	Glenariff and Glendun '93—Shoolbred *837*. Common.
40	L'derry	Toome bridge (*dasyphyllus*) '99—Druce *285*. Common.

Rubus viridis Kalt.

20	Wicklow	Altadore Glen '93—P. *715*.

Rubus Bellardi Wh. & N.

2	Kerry	Killarney, Babington—*Cyb.* I.

Rubus hirtus W. & K.

12	Wexford	Wexford, common (*rubiginosus*), '96—Marshall *537*.
17	Galw. NE.	Clonbrock '96—P.
23	Westmth.	Knock Drin and Knock Ross '95—Linton *503*.
38	Down	Aghaderg (*Kaltenbachii*) (Lett)—S. & P. *874*.

Rubus saxicolus P. J. Muell.

20	Wicklow	Lough Dan '93—P. *718*.
21	Dublin	Three Rock Mountain, Raheny, Foxrock, '93—P. *718*.
38	Down	Saintfield (Waddell)—W. M. Rogers.

Rubus dumetorum Wh. & N.

8	Limrck.	Foynes '85–6—Stewart *863*.
11	Kilkny.	Ferrybank (*ferox*) '95—M. & S. *545*. Kilkenny (*tuberculatus*), Babington—*Cyb.* I.
12	Wexford	About Wexford (type and *diversifolius*) '96—Marshall.
14	Queen's	Portarlington (*diversifolius* and *tuberculatus*) '93—P.
16	Galw. W.	Oughterard and Clonbur (*ferox*) '95—M. & S. *545*. Roundstone (*fasciculatus*), Oliver—*Cyb.* I.

18	King's	Portarlington (between *ferox* and *diversifolius*) '93—P.
19	Kildare	Monasterevan (*diversifolius*) '93—P. *715*.
20	Wicklow	Luggela (*diversifolius*) '93—P.
21	Dublin	Raheny (*tuberculatus*) '93—P. *715*. Clontarf (*diversifolius*) '93—P. *718*.
22	Meath	New Grange (*tuberculatus*), Babington—*Cyb.* I.
23	Westmth.	Knock Drin to Mullingar (*ferox*) '95—Linton *503*.
38	Down	Aghaderg (*diversifolius*) (Lett)—S. & P. *874*. Var. *fasciculatus* not rare—*Fl. NE.*
39	Antrim	Glendun '94—Brenan *167*. Not rare.
40	L'derry.	Near Ardtrea (*fasciculatus*), Stewart—*Fl. NE.*

Rubus corylifolius Smith.

8	Limrck.	Askeaton (*cyclophyllus*): type not rare in north, '85–6—Stewart *863*.
9	Clare	Inishmore '95—P. *740*.
11	Kilkny.	Ferrybank (*sublustris*) '95—M. & S. *545*.
12	Wexford	Wexford (type and *cyclophyllus*) '96—Marshall.
14	Queen's	Maryborough (*sublustris* and *cyclophyllus*) '93—P. *715*.
16	Galw. W.	Roundstone, Oliver—*Cyb.* I.
18	King's	Near Portarlington (*sublustris*) '93—P. *715*.
19	Kildare	Monasterevan '93—P. *715*.
20	Wicklow	Enniskerry (*sublustris*) '93—P. *715*. Wicklow—*Cyb.* I.
21	Dublin	Howth Junction '93: common in its various forms—P.
23	Westmth.	Knock Drin (*sublustris*) '94—Levinge *485*.
26	Mayo E.	Cong (*sublustris* and *cyclophyllus*) '95—M. & S. *545*.
32	Monaghn.	Drumreaske, &c.: frequent, '00—Waddell.
35	Dongl. W.	River Eglish '91 (Hanbury); Killybegs—*Fl. Don.*
36	Tyrone	Co. Tyrone '96—Miss Knowles.
37	Armagh	Tartaraghan (*cyclophyllus*), Armagh (*sublustris*),'92—P.
38	Down	Cultra, Stewart: common—*Fl. NE.*
39	Antrim	Larne (*conjungens*) '93—Shoolbred *837*. C.—*Fl. NE.*
40	L'derry	Common—*Fl. NE.*

Rubus Balfourianus Blox.

2	Kerry N.	Killarney, Babington—*Cyb.* I.
4	Cork Mid	Currabinny '00—Phillips.
5	Cork E.	Whitegate '00—Phillips.
7	Tipp. S.	Clonmel '00—Phillips.
14	Queen's	Portarlington '93—P. *718*.

21	Dublin	Howth and Balbriggan '93—P. *715*.
23	Westmth.	Mullingar '94—Levinge *485*.
26	Mayo E.	South of Cong '96—Marshall *537*.
32	Monaghn.	Bessmount '00—Waddell.

Rubus cæsius L. Dewberry.

1	Kerry S.	Cloonee '00 : frequent—Scully.
2	Kerry N.	Ballybunnion '99 : frequent—Scully.
3	Cork W.	Glengariff (Carroll)—Allin *Fl.* '83.
5	Cork E.	Whitegate '97—Phillips. Fermoy, Babington—*Cyb.* I.
6	Waterfd.	Tramore and Ballyscanlan '99—P.
7	Tipp. S.	Fethard and Cahir '00—Phillips.
9	Clare	Inishmore '95—P. Burren and Aran common.
10	Tipp. N.	Cloughjordan '00—P. Lough Derg, Colgan—*Cyb.* II.
11	Kilkny.	Between Kilkenny and Callan '00—Phillips.
12	Wexford	Rosslare '97—Marshall. Frequent on the coast.
14	Queen's	Near Portarlington '93—P. *715*. Lisduff—Phillips.
15	Galw. SE.	Lough Fingall '99—P. Castle Taylor; L. Derg.
16	Galw. W.	Lough Corrib, Miss Jackson—*Cyb.* II.
17	Galw. NE.	Clonbrock '96—P.
18	King's	Parsonstown (M. Dowd)—More '72 *614*.
20	Wicklow	Co. Wicklow, *Hb.* J. Ball—Focke '91 *320*.
21	Dublin	Little Forest, Colgan—*Cyb.* II.
23	Westmth.	Knock Ross and Knock Drin—Levinge '94 *484*.
26	Mayo E.	S. of L. Mask '95—M. & S. *545*. L. Carra—Focke *320*.
33	Ferman.	Lough Erne, *Hb.* J. Ball—Focke '91 *320*.
34	Dongl. E.	Foyle above Derry (D. Moore)—Larcom '37 *468*.
35	Dongl. W.	Lough Akibbon and Lough Eske—*Fl. Don.*
37	Armagh	Lough Neagh—More '60 *600*.
39	Antrim	Near Doagh, Stewart : L. Neagh, Babington—*Fl. NE.*

Rubus saxatilis L. Stone Bramble.

Census 29—East 9, Centre 10, West 10.

2	Kerry N.	Killarney '00 : south only, locally abundant—Scully.
8	Limrck.	Doon, and abundant at Mullagh, '00—P.
9	Clare	Dromoland '98—W. de V. Kane. Burren and Aran c.
10	Tipp. N.	Cloughjordan '00, L. Derg below Portumna '97—P.
14	Queen's	Maryborough '96—P. Glenbarrow '84—Hart *383*.
15	Galw. SE.	Moyode '99—P. Frequent in W. and on Lough Derg.
16	Galw. W.	Muckanaght '98—Colgan. Eastern lakes f., mtns. r.
17	Galw. NE.	South-west of Knockmae '99—P.

18	King's	Philipstown and Clonad Wood '96—P. Edenderry.
19	Kildare	Monasterevan—Threlkeld 1726 *886*.
20	Wicklow	Dargle, and between L. Dan and Luggela—*Ir. Fl.* '33.
21	Dublin	Kelly's Glen, D. Moore—*Cyb.* I. Not found—Colgan.
22	Meath	Lough Sheelin '96—P.
23	Westmth.	Knock Ross—Levinge '94 *484*. L. Ennel; L. Ree.
24	Longfd.	Elfeet Bay '00—P. Frequent by Lough Ree.
25	Roscomn.	Yew Point on Lough Ree '85–6—B. & V. *113*.
26	Mayo E.	N. of Claremorris '00—P. F. by L. Mask & L. Corrib.
27	Mayo W.	L. Conn f. '00—P. Doo L., Croaghpatrick—Hart *380*.
28	Sligo	Ox Mountains '96—Colgan. Frequent on hills in E. half.
29	Leitrim	Glenade '00—P. Frequent in the north.
31	Louth	Carlingford Mountain '78—Stewart.
33	Ferman.	Florencecourt '00—P. Common by lakes in NW. half.
34	Dongl. E.	Brown Hall '00—P. F. in extreme N. and S.—*Fl. Don.*
35	Dongl. W.	Ards, &c.: local—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles. Patten's Glen—*Cyb.* I.
37	Armagh	Camlough Mtn. '00—Lett & Waddell. S. Gullion—P.
38	Down	Slieve Muck '96—P. Frequent in Mournes.
39	Antrim	Fair Head '97—P. Frequent—*Fl. NE.*
40	L'derry	Magilligan '96—Mrs. Leebody. Frequent—*Fl. NE.*

Rubus Chamæmorus L. Cloudberry.

36	Tyrone	Sperrin Mountains west from Dart '92, very sparingly—
40	L'derry	Hart & Barrington *407*.

Dryas octopetala L. Mountain Avens.

Census 10—East 2, Centre 1, West 7.

9	Clare	Black Head '99—Miss Knowles. Abundant in Burren.
15	Galw. SE.	L. Fingall '99—P. C. Taylor; Kinvarra district c.
16	Galw. W.	Gentian Hill '00—Phillips. Barna Head; Lisoughter.
17	Galw. NE.	Castle Lambert '99—Mrs. Joyce *440*.
28	Sligo	Ben Bulben '92—P. Abundant on this range.
29	Leitrim	Glenade '99—P. North only: frequent?
33	Ferman.	Knockmore '00—West & Tetley. Poulaphuca—*902*.
35	Dongl W.	Slieve League—*Fl. Don.*
39	Antrim	Cliffs north of Knock Dhu '97 (Lett)—Stewart *867*.
40	L'derry	Benevenagh '92—P.

Has its headquarters on the Clare-Galway and Sligo-Fermanagh limestone uplands, with a few outlying stations in the west and north.

Geum urbanum L. Wood Avens.
Divisions all. Common.

Geum rivale L. Water Avens.

Census 35—East 11, Centre 13, West 11.

1	Kerry S.	Kenmare '98—P. Frequent—Scully.
2	Kerry N.	Killarney '00: rather rare—Scully.
3	Cork W.	Near Millstreet '00: rare—Phillips.
4	Cork Mid	Blarney bog '41—Power *Fl.*
5	Cork E.	Near Buttevant (Carroll)—Allin *Fl.* '83.
7	Tipp. S.	Thurles '00—Phillips. L. Muskry '80—Hart *372*.
8	Limrck.	Mullagh '00—P.
9	Clare	Lisdoonvarna '00—Miss Knowles. Burren c.—Foot *324*.
10	Tipp. N.	Silvermines '99—P. Frequent.
12	Wexford	Enniscorthy (Miss A. Preston)—B. & M. *MS.*
13	Carlow	Tullow and Ballintemple '99—P.
14	Queen's	Maryborough '96—P. Frequent.
15	Galw. SE.	Dalystown '97—P. Frequent.
16	Galw. W.	Muckanaght '82—Hart *380*.
18	King's	Pallas Lough '00—P. Frequent.
19	Kildare	Kilcullen '96—P. Frequent.
20	Wicklow	R. Slaney below Baltinglass '81—Hart *371*.
21	Dublin	Woodlands '00 (Miss Hunter): rare—Colgan.
23	Westmth.	Glynnwood House '99—P. Rare.
24	Longfd.	Woodlawn '98, Ballymahon, Saint's Island—P.
25	Roscomn.	Mount Talbot '97—P.
26	Mayo E.	Ballinrobe '91—Mrs. Persse!
27	Mayo W.	Derreen '00—P. Loughty Mountain '82—Hart *380*.
28	Sligo	Head of Owenduff R. '96—Colgan. F. in east half.
29	Leitrim	Annaghearly L., L. Gill, Glenade, '99—P.
30	Cavan	Farnham '96—P. F. in NW.—Stewart *854*.
32	Monaghn.	Rockcorry '00—Somerville.
33	Ferman.	Florencecourt '00—P. Common.
34	Dongl. E.	Frequent in centre and south—*Fl. Don.*
35	Dongl. W.	Creeslough, &c.: frequent—*Fl. Don.*
36	Tyrone	Ardtrea '96—Miss Knowles.
37	Armagh	Loughnashade '80 (Johnson!): rare—P. *701*.
38	Down	Holywood Waterworks! '95—Mrs. Swan.
39	Antrim	Muckamore '93—P. Common—*Fl. NE.*
40	L'derry	Near Ardmore '97—Mrs. Leebody. Common—*Fl. NE.*

Rather local, but probably occurs in all divisions.

Fragaria vesca L. Wild Strawberry.

Divisions all. Common.

Potentilla Fragariastrum Ehrh. Barren Strawberry.

Divisions all. Common.

Potentilla Tormentilla Neck. Tormentil.

Divisions all. Abundant.

Potentilla procumbens Sibth.

Census 32—East 12, Centre 12, West 8.

3	Cork W.	Inchigeela '00—Phillips.
4	Cork Mid	Ballyphehane—Power *Fl.* '45.
5	Cork E.	Youghal '00—Phillips.
6	Waterfd.	Dungarvan '99—P.
7	Tipp. S.	Ardmayle '98, and common in the south—P.
8	Limrck.	Lough Gur and Doon '00—P.
10	Tipp. N.	Dromineer '00—Phillips. Common in NW. half.
12	Wexford	Wexford and Courtown '96—Marshall.
13	Carlow	Killedmond and base of Blackstairs '99—P.
14	Queen's	Grantstown '98—P.
15	Galw. SE.	Loughrea '00—Phillips. Chevy Chase '00—P.
16	Galw. W.	Oughterard '99—P. Inishbofin and c. on E. margin.
17	Galw. NE.	Barbersfort '99, Annaghdown '00—P.
20	Wicklow	Wicklow '97—P.
21	Dublin	Ballycorus '00 : local—Colgan.
23	Westmth.	Near Knock Body '95—Levinge *486*.
24	Longfd.	Ballymahon, L. Gowna, '00—P. L. Ree—B. & V. *113*.
25	Roscomn.	Arigna '00—P.
26	Mayo E.	Claremorris '00—P. Common in the west.
27	Mayo W.	Mallaranny '99—Marshall. Frequent.
28	Sligo	Ballysadare '00, Lough Gill, Lough Gara—P.
29	Leitrim	Ballinamore '00 : common throughout—P.
30	Cavan	Cavan '96—P. Belturbet, Ballyconnell—Somerville.
31	Louth	Ballymascanlan '00—P.
32	Monaghn.	Monaghan '00—Somerville. Frequent.
33	Ferman.	Florencecourt and Belcoo '00—P.
34	Dongl. E.	Bridge End and Galliagh (Hunter)—Hart '99 *405*.
36	Tyrone	Omagh '96—Miss Knowles.

37 Armagh Frequent throughout '92—P.
38 Down Marino '93—P. Local.
39 Antrim Cullybackey '99—Miss Knowles. Frequent.
40 L'derry Kilrea '94—P. Rare?

Local, but frequent throughout the greater part of Ireland.

Potentilla reptans L.

Divisions all, but unequally distributed, being rare in some, as in 17 Galw. NE., and 23 Westmeath.

Potentilla Anserina L. Silverweed.

Divisions all. Common.

Potentilla fruticosa L. Shrubby Cinquefoil.

9 Clare Black Head '99—Miss Knowles. Locally abundant in N.
16 Galw. W. Lemonfield near Oughterard—Wade 1804 *902*.
17 Galw. NE. Near Headford, Shuttleworth—*Fl. Hib.* '36.
26 Mayo E. Between Ballycurrin and Castletown, Miss Jackson—*Cyb.* II.

Confined to about forty miles of the western edge of the Limestone Plain.

Potentilla palustris Scop. Marsh Cinquefoil.

Divisions all. Frequent. Rather calcifuge.

Alchemilla arvensis Scop. Parsley Piert.

Divisions all. Common.

Alchemilla vulgaris L. Lady's Mantle.

Divisions all. Frequent.

Alchemilla alpina L.

1 Kerry S. Brandon '94—Scully.
20 Wicklow Cliffs above Lough Ouler '95—P.

The records for West Galway (*Ir. Fl.*) and Sligo (*Fl. Ulst.*) are discredited.

Agrimonia Eupatoria L. Agrimony.

Divisions all. Frequent.

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Agrimonia odorata Mill.

Census 20—East 10, Centre 1, West 9.

1	Kerry S.	Valentia '92 : rather rare—Scully.
2	Kerry N.	Killarney '96 : rather rare—Scully.
3	Cork W.	Timoleague '97 : rare—Phillips.
4	Cork Mid	Near Ballinhassig '99 : rare—Phillips.
5	Cork E.	Near Whitegate '99 : rare—Phillips.
6	Waterfd.	Tramore, Mt. Congreve, '99—P. Carrickbeg—Phillips.
8	Limrck.	Doon '00—P.
11	Kilkny.	West of Ballinlaw ferry '99—P.
13	Carlow	South of Carlow '98, Borris '99—P.
16	Galw. W.	L. Mask '95—M. & S. *545*. Roundstone; Clifden.
20	Wicklow	Enniskerry—More '72 *614*.
22	Meath	Kilberry '00—P.
27	Mayo W.	L. Conn '00—P. Bartragh I., More—*Cyb.* II.
28	Sligo	Strandhill '97—P.
29	Leitrim	Common by Lough Gill '99—P.
31	Louth	Bellurgan '00—P.
34	Dongl. E.	Lag '98—Hart *405*. NW. of Moville—*Fl. Don.*
35	Dongl. W.	Near Srule ['91], Hanbury and Hart—*Fl. Don.*
38	Down	Downpatrick '00, Comber '95—P.
39	Antrim	Near Glenarm '98—Druce *286*. Glendun, Shane's Castle, Crumlin—*Fl. NE.*

Calcifuge, the only stations situated on the limestone being those in Mayo, Sligo and Leitrim. Widespread, but rare.

Poterium Sanguisorba L. Salad Burnet.

Census 21—East 10, Centre 7, West 4.

4	Cork Mid	Kinsale (Stopford), Bandon—Allin *Fl.* '83. Rare.
5	Cork E.	Near Midleton '97 : rare—Phillips.
7	Tipp. S.	North of Clonmel '97—P.
8	Limrck.	Mullagh abundant '00—P.
9	Clare	Ballinalackan '00—Miss Knowles. Burren and Aran c.
10	Tipp. N.	Rapla '99—P. Roscrea—Phillips. Dromineer—Colgan.
11	Kilkny.	Thomastown '98—P. Nore valley frequent.
12	Wexford	Knockmore in N. Wexford—Moffat '89 *552*.

13	Carlow	Bagenalstown '97—P.
14	Queen's	Ballybrophy '00—Phillips. Attanagh—P. Grennan.
15	Galw. SE.	Moyode '99 : frequent in the south-west—P.
17	Galw. NE.	Merlin Park '99—Mrs. Joyce!
18	King's	Near Birr '00—Phillips.
19	Kildare	Curragh '97, Maynooth, Leixlip—P. Athy—*Cyb.* I.
20	Wicklow	South of Greystones '94—P. North-east corner only.
21	Dublin	Howth '00 : frequent—Colgan.
22	Meath	Bective '96, Gormanstown '95—P.
23	Westmth.	Rinardo Bay on L. Ree '85–6—B. & V. *113*.
24	Longfd.	St. Kevin's '99—Miss Rosa Smith!
34	Dongl. E.	Ballyshannon, Admiral Jones—*Cyb.* I.
39	Antrim	Glenmore '95—Davies *255*.

Calcicole and local. Almost absent from northern half of Ireland. Considered by A. G. More as probably introduced in Antrim, but evidence is wanting. Lisburn is the home of several other calcicole plants very rare in the north—*e.g.*, *Papaver Rhœas*, *Saxifraga tridactylites*, *Orchis pyramidalis*.

Poterium officinale Hook. fil. Great Burnet.

Census 4—East 3, Centre 0, West 1.

27	Mayo W.	L. Conn abundant '00—P. L. Cullin, More—*Cyb.* I.
38	Down	Donaghadee '93—J. H. Davies!
39	Antrim	Near Carnlough '98—Adams *3*. Rasharkin—*Cyb.* I.
40	L'derry.	Near Agivey, D. Moore—*Cyb.* I.

Rosa spinosissima L. Burnet Rose; Scotch Rose.

Census 36—East 14, Centre 10, West 12.

Divisions all, *except 7 Tipperary S.*, *11 Kilkenny*, *30 Cavan*, *32 Monaghan*. Chiefly on the coasts and on the shores of the large lakes. Probably in all divisions.

Rosa involuta Smith.

Census 8—East 4, Centre 2, West 2.

3	Cork W.	Glengariff '90—Druce *284*.
6	Waterfd.	Near Lismore, Miss E. Currey—*Cyb.* II.
16	Galw. W.	Between Clonbur and Cong '96—Marshall *537*.

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26	Mayo E.	S. of Lough Mask (var. *Doniana*) '95—M. & S. *545*. L. Carra, More—*Cyb.* I.
33	Ferman.	Lower Lough Macnean (var. *Nicholsoni*) '00—P.
38	Down	Hilltown ['90]—S. & P. *874*. Rare—*Fl. NE.*
39	Antrim	Glenarm Park '95—Waddell *898*. Frequent.
40	L'derry	Dungiven, D. Moore—*Cyb.* I. Rare.

Occurs chiefly in the north-east, as var. *Sabini*.

Rosa hibernica Smith.

38	Down	Near Holywood '97—P. Formerly at Stranmillis.
39	Antrim	Glenarm, D. Moore—*Cyb.* I.
40	L'derry	Umbra and Benevenagh, D. Moore—*Cyb.* I.

North-east only, where it has been rather lost sight of since Dr. Moore's time (about 1835).

Rosa mollis Smith.

Census 17—East 9, Centre 4, West 4.

2	Kerry N.	Kilmorna '94: rare—Scully.
3	Cork W.	Glengariff '90—Druce *284*.
4	Cork Mid	Passage '85 (Carroll), *Hb.* Queen's Coll. Cork—Phillips.
12	Wexford	Enniscorthy '98—P.
13	Carlow	Borris '99, and below St. Mullin's '98—P.
14	Queen's	Emo '96—P.
15	Galw. SE.	Castle Taylor—More '55 *598*.
22	Meath	Beauparc '95—P.
31	Louth	Castlebellingham '96—P.
32	Monaghn.	Creeve Lough '00—P.
33	Ferman.	Devenish Island '81-2—Barrington *108*.
35	Dongl. W.	Killybegs '91 (Marshall), Lough Gartan '85—*Fl. Don.*
36	Tyrone	By the Foyle '00—Miss Knowles.
37	Armagh	Lough Ross and frequent about Armagh '92—P.
38	Down	Saintfield '95, Waddell—W.B.E.C. '95-6. R.—*Fl. NE.*
39	Antrim	Ballycastle '97—P. Frequent.
40	L'derry	Kilrea '95—P. R.—*Fl. NE.*

Probably frequent: the Irish roses are as yet very little known.

Rosa tomentosa Smith.

Divisions all: apparently distributed tolerably evenly throughout the country.

Rosa rubiginosa L. Sweet Briar.

Census 24—East 10, Centre 8, West 6.

1	Kerry S.	‡Cahirciveen '94 : rare and local—Scully.
2	Kerry N.	‡Castleisland '89 : rare—Scully.
3	Cork W.	Glengariff '90 (Druce): rare—Phillips.
4	Cork Mid	†Passage—Drummond '20 *287*.
7	Tipp. S.	Thurles '98—P.
8	Limrck.	Castleconnell '00—R. D. O'Brien !
9	Clare	Clare Castle '99—Miss Knowles.
10	Tipp. N.	Near Portumna '00—Phillips. ‡Lough Ourna '99—P.
12	Wexford	Near Wexford, probably bird-sown, '96—Marshall *537*.
13	Carlow	Goresbridge '99—P.
14	Queen's	Abbeyleix '00—Phillips. †Maryborough '96—P.
15	Galw. SE.	Portumna '00—Phillips.
20	Wicklow	Glenmacnass, Hart—*Cyb.* II. Rare.
22	Meath	Frequent by Boyne below Navan '00, Laytown '96—P.
23	Westmth.	‡Loughlanstown (Groves)—Levinge '94 *484*.
30	Cavan	†Lough Ramor '96—P.
31	Louth	Togher and †Louth '96—P.
33	Ferman.	Florencecourt '99 and Portora '00—West.
34	Dongl. E.	‡Near Derry, W. E. Hart—*Fl. Don.*
36	Tyrone	Omagh and by Lough Neagh '96—Miss Knowles.
37	Armagh	Lough Neagh apparently native, †Newry, &c. '92—P.
38	Down	Saintfield '97—Waddell *898*. Rare—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Frequent.
40	L'derry	Coleraine '96—Mrs. Leebody. Locally frequent.

Standing rather uncertain, but in the north has all the appearance of a native.

Rosa micrantha Smith.

2	Kerry N.	Pyrmont near Tarbert '90 : rare—Scully.
3	Cork W.	Schull '96 : rare—Phillips.
4	Cork Mid	Cork '00, Ovens, Kinsale : frequent in S.—Phillips.
5	Cork E.	Castletownroche '00 : frequent—Phillips.

Confined to the extreme south.

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Rosa sepium Thuill.

10 Tipp. N. Lough Derg near Portumna '00—Phillips.
15 Galw. SE. Lough Derg near Portumna '00—Phillips.
23 Westmth. Knock Eyon and Knock Body '95—Levinge *486*.
26 Mayo E. Common by L. Corrib south of Cong '96—Marshall *537*.

Distribution not yet worked out.

Rosa canina L. Dog Rose.

Divisions all. Common.

Rosa glauca Vill.

37 Armagh Mullaghmore Lough '99—Druce *285*.
38 Down Three stations near Saintfield '94-6—Waddell *898*.
39 Antrim Cave Hill '99—Druce *285*. Belfast, Larne—S. & P. *873*.
40 L'derry Near Lough Neagh '99—Druce *285*.

Possibly frequent: range unknown.

Rosa arvensis Huds. Trailing Rose.

Census 37—East 15, Centre 10, West 12.

1 Kerry S. Kenmare '99: rare and local—Scully.
2 Kerry N. Killarney '99: rare—Scully.
3 Cork W. Skibbereen '96: frequent—Phillips.
4 Cork Mid Crosshaven '00: frequent—Phillips.
5 Cork E. Whitegate '00: frequent—Phillips.
6 Waterfd. Ballyscanlan Lough '99: frequent—P.
7 Tipp. S. Cahir '00—P. Frequent.
8 Limrck. Curragh Chase '00—P. Askeaton, Foynes—Stewart *863*.
9 Clare Dromoland '98—W. de V. Kane. Rare in N., c. in S.
10 Tipp. N. Dromineer '00—Phillips. Frequent, widespread.
11 Kilkny. Thomastown '98—P. Frequent.
12 Wexford Enniscorthy '98—P. Very frequent.
13 Carlow Killedmond '98—P. Frequent throughout.
14 Queen's Abbeyleix '00—Phillips. Very frequent.
15 Galw. SE. Dalystown '97—P. South-west f., south-east r.
16 Galw. W. Kilbeg ferry '99—P.
17 Galw. NE. Kilbeg wood '99—P.
18 King's Clara '99—P. Frequent throughout.
19 Kildare Kildare '98, Carbury, Kilcullen—P.

20	Wicklow	Wicklow '97, Vale of Clara '94—P.
21	Dublin	Greenhills '00 : frequent—Colgan.
22	Meath	Trim abundant '00, Navan '96—P.
23	Westmth.	Moate '99—P. Local.
24	Longfd.	Saint's Island and near Roosky '00—P.
25	Roscomn.	Mote Park '97: widespread but rare—P.
27	Mayo W.	Westport '99—Marshall.
28	Sligo	Annaghmore '00, Lough Gill '99—P.
29	Leitrim	Lurganboy '99 : frequent—P.
31	Louth	Kerney's Cross '96 : south half frequent—P.
32	Monaghn.	Bragan '00—Waddell.
33	Ferman.	Devenish Island '00—West. Frequent.
34	Dongl. E.	Pettigoe and Laghy—*Fl. Don.*
35	Dongl. W.	Croaghross, &c. : local and rare—*Fl. Don.*
37	Armagh	Kinnego on Lough Neagh '96—Lett!
38	Down	Killyleagh '98 : locally frequent—P.
39	Antrim	Glenariff '93—Shoolbred. Rare—*Fl. NE.*
40	L'derry	Garvagh, D. Moore : rare—*Fl. NE.*

Rather unequally distributed, as will be seen. Rare in the north.

Pyrus Aria Ehrh. White Beam.

Census 25+(1)—East 7+(1), Centre 9, West 9.

2	Kerry N.	Killarney '00 : south only—Scully.
7	Tipp. S.	Ardfinnan and Vale of Aherlow '00—P.
8	Limrck.	Curragh Chase! '00—O'Brien. Pallasgreen—Hb.L.F.C.!
9	Clare	Carrowgar Bay on L. Derg '96—Colgan.
10	Tipp. N.	Dromineer '99, Friar's Lough, Portumna—P.
11	Kilkny.	Thomastown '98—P.
12	Wexford	Kilmanock v.r., †Alderton—B. & G. '89 *100*.
13	Carlow	Killedmond '00—Miss Lindemann! On cliffs, &c., rare.
14	Queen's	Maryborough esker, and Portarlington, '96—P.
15	Galw. SE.	St. Clerans '99—P. Frequent in W., rare on L. Derg.
16	Galw. W.	Clonbur '95—M. & S. *545*. Many places—Mackay *522*.
17	Galw. NE.	Knockmae '99, Donamon, and f. on Lough Corrib—P.
18	King's	Philipstown, Derryad '96—P. Portarlington—Hart *383*.
20	Wicklow	Avondale looking wild '99—P. Glencree—*Cyb.* I.
21	Dublin	Ireland's Eye '94—P. Howth—*Fl. Howth.*
23	Westmth.	Hare I. on L. Ree '99—P. †Knock Drin—Levinge *484*.
24	Longfd.	Chapel I. '97 and Elfeet Bay '00, both on L. Ree—P.

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25 Roscomn. St. John's Wood '99: †elsewhere—P.
26 Mayo E. Claremorris '00—P. About Clonbur '95—M. & S. *545*.
28 Sligo Lough Gill '99—P. Frequent in east half.
29 Leitrim Lough Gill '99—P.
34 Dongl. E. Near Brown Hall—*Fl. Don.*
35 Dongl. W. Glenveagh—*Fl. Don.*
(38 Down Mourne Mountains, Templeton—*Fl. NE.* Extinct?)
39 Antrim Carrick-a-rede, Corry: very rare—*Fl. NE.*
40 L'derry Umbra and near Benevenagh, D. Moore—*Cyb.* I.

Chiefly on the limestone, not uncommon. Very rare in the south; also in the north, where it has not been seen recently except in Donegal.

Pyrus Aucuparia L. Mountain Ash; Rowan.

Divisions all. Frequent.

Pyrus Malus L. Crab Apple.

Divisions all. The native form (*acerba*) and the introduced form (*mitis*) are about equally abundant: I have noted both as frequent in almost every division I have worked in, *acerba* often occurring in rocky uncultivated ground, where it is no doubt native.

Cratægus Oxyacantha L. Hawthorn.

Divisions all. Common.

Saxifraga oppositifolia L. Purple Saxifrage.

Census 7—East 1, Centre 0, West 6.

16 Galw. W. Lisoughter '98—Colgan *221*. Rare on the mountains.
27 Mayo W. Cushcamcarragh Mountain '99—Colgan. Very rare.
28 Sligo Annacoona '84—B. & V. *112*. Ben Bulben range f.
29 Leitrim Glenade, both sides, '99—P. Arroo '84—B. & V. *112*.
34 Dongl. E. Glengad '98—Hart *405*. Bulbin Mount—*Fl. Don.*
35 Dongl. W. Poisoned Glen, &c.: rare—*Fl. Don.*
40 L'derry Benevenagh '92—P.

Mountains of the north-west, from Galway Bay to Lough Foyle.

Saxifraga nivalis L.

28 Sligo Near Annacoona '84—B. & V. *112*.

Saxifraga stellaris L.

Census 17—East 7, Centre 3, West 7.

1	Kerry S.	Near Sneem '92: frequent—Scully.
2	Kerry N.	Killarney '96: frequent in the south—Scully.
3	Cork W.	Hungry Hill '94: rare—Phillips.
6	Waterfd.	Comeraghs, two stations, '82-3—Hart *381*.
7	Tipp. S.	Muskry Lough '00—P. Frequent on Galtees—Hart *372*.
8	Limrck.	Galtymore and Carrignabinnian '80—Hart *372*.
12	Wexford	Mount Leinster '98—P.
13	Carlow	Mount Leinster '98—P.
16	Galw. W.	Glen Inagh river '99—Colgan *221*. Mountains, f.
20	Wicklow	Lugnaquilla '97—Colgan. L. Nahanagan; L. Ouler.
21	Dublin	Upper Glenasmole '96—Colgan.
27	Mayo W.	Nephin '00—P. Frequent on the mountains.
34	Dongl. E.	Frequent—*Fl. Don.*
35	Dongl. W.	Frequent throughout—*Fl. Don.*
36	Tyrone	Dart '92—P. *687*.
38	Down	Slieve Donard '98—P. Mournes only, local.
40	L'derry	Dart '92—P. Sawel and Clontygeragh—*Fl. NE.*

Saxifraga Geum L.

1	Kerry S.	Kenmare '99: locally abundant—Scully.
2	Kerry N.	Killarney '00: confined to the south—Scully.
3	Cork W.	Adrigole '94—Phillips. Confined to the west; rare.

Var. *S. hirsuta* has a similar distribution.

Saxifraga umbrosa L. London Pride.

Census 11—East 2, Centre 2, West 7.

1	Kerry S.	Kenmare '99: frequent—Scully.
2	Kerry N.	Killarney '00: confined to the south—Scully.
3	Cork W.	Millstreet '00, Mizen Head '96: frequent—Phillips.
4	Cork Mid	Inniscarra and Macroom '98: rare—Phillips.
6	Waterfd.	Comeraghs '82-3—Hart *381*.
7	Tipp. S.	Muskry L. '00—P. Galtees & Knockmealdowns, local.
16	Galw. W.	Derryclare '99—Colgan *221*. F. except on limestone.
26	Mayo E.	Glendaduff '00—P.

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27 Mayo W. Nephin '00—P. Throughout, frequent.
34 Dongl. E. Knockglass, Dickie—*Fl. Ulst.* '64.
35 Dongl. W. Errigal, &c.: local—*Fl. Don.*

Conspicuously calcifuge throughout its range. Often cultivated, and sometimes run wild, as at Altadore Glen (Wicklow), Strabane (Tyrone), Rockport (Down), and elsewhere.

Saxifraga Hirculus L.

Census 6—East 1, Centre 4, West 1.

10 Tipp. N. Three miles from Cloughjordan, Hodgens—*Fl. Hib.* '36.
14 Queen's Near Mountrath (J. Morrison)—More '72 *614*.
18 King's Bog of Allen near Portarlington, R. Tucker—*Cyb.* I.
23 Westmth. Lisclogher bog '88—Levinge *484*.
27 Mayo W. Bog near Ballycastle, H. D. B. Dillwyn—*Cyb.* II.
39 Antrim Garron Point '86—P. Lough Naroon '84—Brenan *166*.

On low-level peat bogs except in Antrim (and Mayo ?).

Saxifraga aizoides L.

Census 5—East 1, Centre 0, West 4.

28 Sligo Ox Mountains '93, Miss Kinahan—*Cyb.* II. Ben Bulben range common.
29 Leitrim Glenade '99—P. Faughrey Mountain '96—Colgan.
34 Dongl. E. Ballyward Lake '93—*Fl. Don.*
35 Dongl. W. Slieve League and Alt Mountain—*Fl. Don.*
39 Antrim Murlough Bay '00—Mrs. Swan. NE. corner only, locally abundant.

Round the northern coast, from Killala Bay to beyond Fair Head. The Kerry record is more than doubtful.

Saxifraga tridactylites L.

Census 33—East 12, Centre 9, West 12.

1 Kerry S. Castlegregory '94: rare—Scully.
2 Kerry N. Lerrig '99: rather frequent—Scully.
3 Cork W. Skibbereen '97—Phillips.
4 Cork Mid Ballincollig '90: common—Phillips.
5 Cork E. Whitegate '00: common—Phillips.
6 Waterfd. Stradbally '99: frequent—P.
7 Tipp. S. Cahir '00: frequent—P.

8	Limrck.	Lough Gur '00—P. Common in north.
9	Clare	Black Head '99—Miss Knowles. C. in N., r. in S.
10	Tipp. N.	Nenagh '99—P. Widespread, frequent.
11	Kilkny.	Thomastown '98 : frequent—P.
12	Wexford	New Ross '91 : not unfrequent—B. & M. *MS.*
13	Carlow	Tullow '99 : frequent—P.
14	Queen's	Maryborough '96—P.
15	Galw. SE.	Dalystown '97—P. Common throughout.
16	Galw. W.	Roundstone '96—P. F. on east margin, r. elsewhere.
17	Galw. NE.	Knockmae '00 : frequent—P.
18	King's	Birr '00, Philipstown '96—P.
19	Kildare	Athy '99, Carton '94—P.
21	Dublin	Rush sandhills '00 : local—Colgan.
22	Meath	Drogheda '96 : Lough Sheelin '85—P.
23	Westmth.	Moate '99—P. Frequent.
24	Longfd.	Edgeworthstown '99, Ballymahon, Cashel Lodge—P.
25	Roscomn.	Roscommon '97 : throughout—P.
26	Mayo E.	Ballinrobe '00—Mrs. Persse ! Clonbur '95—Marshall.
27	Mayo W.	Achill Island '98—P.
28	Sligo	Rosses Point '00—West. Knocknarea '97—P.
29	Leitrim	Glenade '99—P.
34	Dongl. E.	Bundoran '99—West. In N. and S., rare—*Fl. Don.*
35	Dongl. W.	Frequent, but absent from south—*Fl. Don.*
38	Down	Cloughy '91—Waddell. Lisburn—Davies *263*.
39	Antrim	Near Lisburn '98—Davies *263*.
40	L'derry	Bellarena '94—Mrs. Leebody. Frequent along coast, D. Moore—*Fl. NE.*

Rare off the limestone, as in the north and the south-east. Abundant over the Central Plain.

Saxifraga granulata L.

Census 7+(3)—East 7+(2), Centre 0, West (1).

(3	Cork W.	Near Bandon '00—Mrs. Swan. Introduced—Phillips).
(4	Cork Mid	Blarney—Power *Fl.* '45. Planted—Phillips.)
(5	Cork E.	Trabolgan demesne '98, introduced—Phillips.)
20	Wicklow	S. of Mizen Head '90, Scully—*Cyb.* II. Brittas—*614*.
21	Dublin	Baldoyle racecourse '96, Scully—*Cyb.* II. Very rare.
22	Meath	Slane (De Luc) Templeton *MS.*—*Cyb.* II.
37	Armagh	Rathtrillick '72—B.N.F.C. *117*.

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38 Down †Belvoir Park '70; †Castlereagh Hill—*Fl. NE.*
39 Antrim Near Carnlough, D. Moore—*Cyb.* I.
40 L'derry Near Moneymore, D. Moore—*Cyb.* I.

Native? Possibly so in 20, 21, 22. Mr. Phillips scouts it as regards Cork, and I feel very doubtful about its northern stations.

Saxifraga hypnoides L. Mossy Saxifrage.

Census 8+(1)—East 2, Centre 1, West 5+(1).

9 Clare Throughout Burren—Foot '64 *324*.
15 Galw. SE. Castle Taylor and Garryland—More '55 *598*.
(17 Galw. NE.? Knockmae—Wade 1804 *902*. Not there now—P.)
28 Sligo Lugnagall '96—Colgan. Frequent in E. half.
29 Leitrim Both sides of Glenade '99—P.
33 Ferman. Belmore Mtn. '00—West and Tetley. Frequent in SW.
34 Dongl. E. †Ballyvicstocker Bay—*Fl. Don.*
39 Antrim Murlough Bay '97—P. F. near coast, absent inland.
40 L'derry. Benbradagh '94—Mrs. Leebody. Benevenagh '92—P.

The above records refer to segregate *S. hypnoides* (*gemmifera*, Syme).

Saxifraga sponhemica Gmel.

Census 7—East 3, Centre 2, West 2.

1 Kerry S. Hag's Glen '90—Druce *284*. Brandon '83—Hart *381*.
2 Kerry N. Baurtregaum—Hart '82 *374*.
6 Waterfd. Comeraghs '82–3—Hart *381*.
7 Tipp. S. Muskry L., c., '00—P. Galtees and Knockmealdowns, r.
8 Limrck. Corrignabinnian '80—Hart *372*.
39 Antrim Garron '52, Babington; Cushendall, Cave Hill—*Fl. NE.*
40 L'derry Benevenagh '92—P.

Saxifraga decipiens Ehrh.

1 Kerry S. Slievemish '88: rare but locally abundant—Scully.
2 Kerry N. Slievemish '89: very local—Scully.

Saxifraga Sternbergii Willd.

Census 4—East 0, Centre 1, West 3.

1 Kerry S. Macgillicuddy's Reeks '81—Hart *373*.
7 Tipp. S. Galtymore '80—Hart *372*.
9 Clare Black Head '99, Playfair—W.B.E.C. '99–'00. Burren and Inishmore abundant.
35 Dongl. W. Aranmore '81—*Fl. Don.*

Saxifraga grœnlandica Engl.

1 Kerry S. Brandon '85—Linton *502*.
16 Galw. W. Muckanaght '82—Hart *380*.

"This, rather than *S. cæspitosa* L."—*Cyb.* II.

Chrysosplenium oppositifolium L. Golden Saxifrage.

Divisions all. Common.

Parnassia palustris L. Grass of Parnassus.

Census 33—East 11, Centre 13, West 9.

6 Waterfd. Dunmore '97—P.
7 Tipp. S. Cahir '00—Phillips. Ballinure '98—P.
8 Limrck. Mullagh '00—P. Not rare in the north.
9 Clare Finlough '97, G. Fogerty—*Hb.* L.F.C.! Frequent.
10 Tipp. N. Rapla bog '99: common in NW. half—P.
11 Kilkny. Thomastown '98, &c.: local—P.
13 Carlow Goresbridge '99, Carlow '98—P.
14 Queen's Rathdowney '00—Phillips. Frequent—P.
15 Galw. SE. Woodford '98—P. Frequent throughout.
16 Galw. W. Lough Ross '99—P. East only, not common.
17 Galw. NE. Barbersfort '99: frequent—P.
18 King's Lough Goura and Shannon Harbour '98—P.
19 Kildare Kildare '97: frequent—P.
20 Wicklow Blessington '98, Enniskerry '94—P.
21 Dublin Portrane '00: frequent—Colgan.
22 Meath Lough Sheelin and Enfield '96—P.
23 Westmth. Moate '99—P. Common in west, frequent in centre.
24 Longfd. Woodlawn '98, and frequent on Lough Ree—P.
25 Roscomn. Roscommon '97: frequent—P.
26 Mayo E. Clare '00—P. Callow; Ballinrobe; Clonbur.
27 Mayo W. L. Conn and Killala '00—P. Castlebar '99—Marshall.
28 Sligo Dromore West '96—Colgan. Common in east half.
29 Leitrim Glenade '99, &c.: north only—P.
30 Cavan Mount Nugent '96—P.
31 Louth Ardee '97—P.
32 Monaghn. West of Monaghan, G. C. Hyndman—*Fl. Ulst.* '64.
33 Ferman. Castle Caldwell '00—West and Tetley. Frequent.
34 Dongl. E. Glennagivney and frequent in the south—*Fl. Don.*
35 Dongl. W. Kincashla, &c.: south half only—*Fl. Don.*

36 Tyrone L. Neagh '96—Miss Knowles.
37 Armagh Loughnashade (Johnson!)—P. *701*. North only, rare.
39 Antrim Ballycastle '00—Mrs. Swan. Frequent—*Fl. NE.*
40 L'derry Magilligan '97—Mrs. Leebody. Frequent—*Fl. NE.*

Rather unequally distributed, as the above shows. Rare off the limestone. Its absence from Kerry, Cork, and Down is apparently real.

Cotyledon Umbilicus L. Pennywort.

Divisions all, *except 14 Queen's Co.* A plant of quite uneven distribution. It has a calcifuge tendency, yet is sometimes abundant on limestone areas. On granite and slates it attains its greatest profusion. Apparently rare in 7, 17, 18, 22, 23, 24, 25, and occurs chiefly on non-calcareous rocks in these divisions, in all of which limestone predominates.

Sedum Rhodiola DC. Rose-root.

Census 16—East 5, Centre 1, West 10.

1 Kerry S. Near Waterville '92: on most of the mountains—Scully.
2 Kerry N. Mangerton '96: southern mountains only—Scully.
3 Cork W. Hungry Hill '94: rare—Phillips.
6 Waterfd. Comeraghs '93—Grubb *356*.
7 Tipp. S. Muskry L. abundant '00—P. L. Curra '80—Hart *372*.
9 Clare Cliffs of Moher '00—Miss Knowles. Inishmore '95—P.
16 Galw. W. Benwee '99—Colgan *221*. Frequent on the mountains.
20 Wicklow Lugnaquilla '97—Colgan.
27 Mayo W. Achill '98—P. Locally frequent.
28 Sligo Lugnagall '96—Colgan: and f. on Ben Bulben range.
29 Leitrim Glenade '96—Colgan.
31 Louth Carlingford Mountain '00—P.
34 Dongl. E. Glengad '98—Hart *405*. C. except in centre—*Fl. Don.*
35 Dongl. W. Common throughout—*Fl. Don.*
38 Down Slievemuck '94—P. Mourne Mountains only, rare.
39 Antrim Fair Head '99—Miss Knowles. Frequent in north-east.

‡Sedum Telephium L. Orpine.

Census 19—East 8, Centre 5, West 6.

1 Kerry N. *Near Listowel '94—Scully.
4 Cork Mid Carrigaline—Drummond '19 *287*. *Rare—Phillips.
5 Cork E. Fermoy (Chandlee)—Allin *Fl.* '83. *Rare—Phillips.

9	Clare	Burren, local—Foot '62 *324*. Kilfenora, Foot—*Cyb.* I.
12	Wexford	An escape from cultivation, Carroll—*Cyb.* I.
13	Carlow	An escape from cultivation, Carroll—*Cyb.* I.
14	Queen's	†Mountrath and Cullenagh '97—P.
15	Galw. SE.	Near Woodford, (M. Dowd)—More '72 *614*.
16	Galw. W.	*Oughterard and Maam '95—M. & S. *545*. Lemonfield.
22	Meath	Oldcastle, N. J. Halpin—*Fl. Hib.* '36.
23	Westmth.	Carberry Island in Lough Ree—Foot '64 *328*.
24	Longfd.	Near Ballinalee, "wild"—Foot '64 *328*.
28	Sligo	Ben Bulben '82—Corry *248*. Hazelwood—*Cyb.* I.
32	Monaghn.	†Rockcorry '00—P. ‡Dartrey '00—Somerville.
35	Dongl. W.	‡Roosky '83, A. Stuart, appearing native—*Fl. Don.*
36	Tyrone	‡Lough Neagh '96—Miss Knowles. Coagh—*Fl. Ulst.*
37	Armagh	†Armagh Palace demesne '92—P.
38	Down	Ballygowan '91—P. ‡Frequent—*Fl. NE.*
39	Antrim	Craigbilly '99—Miss Knowles. ‡Rare—*Fl. NE.*

Some old and unconfirmed records are omitted. Well established in certain places, as in the north-east, but probably nowhere native.

*Sedum album L.

Census 17—East 9, Centre 6, West 2.

3	Cork W.	Glandore '96 (J. Groves), Glengariff '94—Phillips.
4	Cork Mid	Crosshaven and near Cork '00—Phillips.
5	Cork E.	Castletownroche '00: frequent—Phillips.
6	Waterfd.	Clonmel '00—Phillips. Cappoquin '99—P.
7	Tipp. S.	Clonmel '00—Phillips. Thurles '98—P.
8	Limrck.	Mullagh '00—P. Foynes—Somerville. Castleconnell.
10	Tipp. N.	Roscrea, plentiful, '00—Phillips.
11	Kilkny	Kilkenny '00—Phillips.
13	Carlow	Tullow '99, Bagenalstown '97—P.
14	Queen's	Abundant at Mountmellick '96—P.
15	Galw. SE.	Loughrea '00—Phillips.
18	King's	Frankford c. '00—P. Shinrone c. '00—Phillips.
19	Kildare	Levitstown '99, Nurney '97—P.
31	Louth	Drogheda '96—P.
36	Tyrone	By Lough Neagh '96—Miss Knowles.
37	Armagh	Occasionally, escaped, '92—P.
39	Antrim	Shane's Castle '94—Miss Knowles. About Antrim.

Fully naturalized in Cork, spreading to wild ground. On old walls of many of the above towns it is abundant likewise.

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*Sedum dasyphyllum L.

4 Cork Mid About Cork (Carroll)—Allin *Fl.* '83. Blarney—Smith 1760 *841*.

5 Cork E. Midleton c. on limestone rocks, and walls at Ballinacurra, '97—Phillips.

Naturalized about Midleton in Cork, where it grows abundantly, looking quite native. Casual merely in Armagh (*701*) and Antrim (*879*, and *Fl. NE.*).

Sedum anglicum Huds.

Census 30—East 13, Centre 7, West 10.

1 Kerry S. Kenmare '99: frequent—Scully.
2 Kerry N. Ballybunnion '99: frequent—Scully.
3 Cork W. Dunmanway '00: common—Phillips.
4 Cork Mid Crosshaven '00: common—Phillips.
5 Cork E. Little Island '00: frequent—Phillips.
6 Waterfd. Stradbally '99—P. Common throughout.
8 Limrck. Lough Gur '00—P. Foynes '99—Somerville.
9 Clare Fanore '00—Miss Knowles. West coast and Aran f.
11 Kilkny. Mullinavat '99—P. Frequent in the south.
12 Wexford Wexford '96—Marshall. Common, on the coast at least.
13 Carlow Near Bagenalstown (R. C. Browne)—More '72 *614*.
16 Galw. W. Kylemore '98—Colgan. Frequent throughout.
17 Galw. NE. Lough Atalia '00—P.
20 Wicklow Wicklow '00—C. Waterfall. Frequent?
21 Dublin Howth '00: common on coast—Colgan.
24 Longfd. By Shannon below Roosky '00—P.
25 Roscomn. Co. Roscommon, F. J. Foot—*Cyb.* I.
26 Mayo E. ‡Ballinrobe '94—Mrs. Persse!
27 Mayo W. Mallaranny '99—Marshall. Frequent.
28 Sligo Mullaghmore '97—P.
30 Cavan Cavan and L. Ramor '96, Drumhawnagh '00—P.
31 Louth Clogher Head '96—P. Rare.
32 Monaghn. †Creeve Lough '00—P.
34 Dongl. E. Common throughout—*Fl. Don.*
35 Dongl. W. Common throughout—*Fl. Don.*
36 Tyrone Strabane '96—Miss Knowles.
37 Armagh Slieve Gullion, &c.: very rare, '92—P.

38	Down	Saintfield '00—P. Coast common, inland rare—*M.NE.*
39	Antrim	Clinty Hill '99—Miss Knowles. Coast c., inland r.
40	L'derry	Bellarena '98—Mrs. Leebody. Coast common—*M.NE.*

Distinctly calcifuge, and preferring the neighbourhood of the sea. This and the following species are sometimes grown about cottages in districts where they are naturally rare or absent.

Sedum acre L. Wall Pepper.

Census 40—East 15, Centre 13, West 12.

1	Kerry S.	Derrynane '00: rather frequent—Scully.
2	Kerry N.	Abbeydorney '99: frequent—Scully.
3	Cork W.	Dunmanway '00: common—Phillips.
4	Cork Mid	Crosshaven '00: common—Phillips.
5	Cork E.	Youghal '00: common—Phillips.
6	Waterfd.	Carrickbeg '00—P. Common on coast.
7	Tipp. S.	Ballinure '98: very frequent—P.
8	Limrck.	Lough Gur '00—P. Common in the north.
9	Clare	Lisdoonvarna '00—Miss Knowles. Common.
10	Tipp. N.	Nenagh '99: common—P.
11	Kilkny.	Thomastown '98: frequent throughout—P.
12	Wexford	Wexford '97—Marshall. Common on coast.
13	Carlow	Borris '99—P. Rather rare.
14	Queen's	Maryborough '96, Grantstown, Shrule—P.
15	Galw. SE.	Rinville '99: common except in centre—P.
16	Galw. W.	Inveran '95—Colgan. Widespread but rare.
17	Galw. NE.	Barbersfort '99: frequent throughout—P.
18	King's	Clonmacnoise '99, Edenderry, &c.: local—P.
19	Kildare	Carbury '96—P.
20	Wicklow	Kilcoole '00—P. ? Common on coast.
21	Dublin	Rush '00: common on coast—Colgan.
22	Meath	Navan '00, Bective, and on the coast—P.
23	Westmth.	Mullingar '97—Carr. Moate and Coosan Point—P.
24	Longfd.	Newtownforbes '00, and frequent about L. Ree—P.
25	Roscomn.	Mote Park '97: frequent throughout—P.
26	Mayo E.	Near Claremorris '00—P. Frequent.
27	Mayo W.	Mallaranny '99—Marshall. Killala '00—P.
28	Sligo	Rosses, Carrowkee, &c.: frequent, '97—P.
29	Leitrim	Annaghearly Lough '99—P. Locally common.
30	Cavan	Mount Nugent '96—P.

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31	Louth	Ballymascanlan '00 : coast frequent—P.
32	Monaghn.	Castleshane, Clontibret, '00—Waddell. Ballybay.
33	Ferman.	Paris Island '00—West & Tetley. Local, not common.
34	Dongl. E.	Common throughout—*Fl. Don.*
35	Dongl. W.	Common throughout—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles. Coagh—*Fl. Ulst.*
37	Armagh	L. Neagh west of Ardmore Point '92—P.
38	Down	Dundrum '00—P. Common—*Fl. NE.*
39	Antrim	Portrush '00—Miss Knowles. Common—*Fl. NE.*
40	L'derry	Magilligan '97—Mrs. Leebody. Common—*Fl. NE.*

Much commoner inland than was previously supposed.

***Sedum reflexum** L. Crooked Stonecrop.

Census 20—East 10, Centre 6, West 4.

4	Cork Mid	Cork—Power *Fl.* '45.
5	Cork E.	Conna and Mallow—Allin *Fl.* '83. Rare—Phillips.
6	Waterfd.	Kilmadock abbey '74, H. G. Carroll—*Hb.*S.&A.M.!
7	Tipp. S.	Rock of Cashel, T. Chandlee—*Cyb.* I.
8	Limrck.	Kilmallock, Carroll—*Cyb.* I.
9	Clare	Newmarket '85-6—Stewart *863*.
11	Kilkny.	Kilkenny '00—Phillips. Wilton, S. Madden—*Cyb.* I.
12	Wexford	Co. Wexford, J. Morrison—*Cyb.* I.
14	Queen's	Camross '00—P.
21	Dublin	Finglas—Mackay '25 *522*. Chapelizod—Wade *900*.
30	Cavan	Cavan '96—P.
31	Louth	Ardee '97—P.
32	Monaghn.	Ballytrain 1805, Templeton *MS.*—*Cyb.* II.
34	Dongl. E.	Near Carrigans—*Fl. Don.*
35	Dongl. W.	Ray and Ramelton—*Fl. Don.*
36	Tyrone	Benburb, Hyndman—*Fl. Ulst.* '64.
37	Armagh	Limestone rocks near Armagh '92—P.
38	Down	Newtownbreda, Stewart: naturalized—*Fl. NE.*
39	Antrim	Antrim '93—P. Naturalized—*Fl. NE.*
40	L'derry	Muff and O'Cahan's Rocks, D. Moore: Limavady, Templeton—*Fl. NE.*

Run wild, chiefly in the north, where it is naturalized on rocks, old walls, and roofs of houses.

***Sedum rupestre** L.

Census 11—East 8, Centre 2, West 1.

3	Cork W.	Rosscarbery '00—Phillips.
4	Cork Mid	Douglas and Crosshaven '00—Phillips.
5	Cork E.	Little Island '99 : rare—Phillips.
7	Tipp. S.	Near Clonmel—Anderson '50 *22*.
13	Carlow	Bagenalstown '00—Phillips.
20	Wicklow	Wall tops near Laragh '88—Colgan. Bray—*Guide* '78.
21	Dublin	Between Dundrum and Rathfarnham—*Fl. Hib.* '36.
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Keady '92—P.
39	Antrim	Glenariff '98—Adams *3*. Shane's Castle '91—P.
40	L'derry	Ballykelly, D. Moore—*Fl. NE.*

Outcast or planted in all cases, and now naturalized.

***Sempervivum tectorum** L. House-leek.

Divisions all, *except 12, 19, 20, 27, 28, 33*, where it no doubt occurs. Planted on houses in all cases, not spreading, and undeserving of a place in the Irish flora, even when starred.

Drosera rotundifolia L. Round-leaved Sundew.

Divisions all. Frequent.

Drosera anglica Huds. Great Sundew.

Census 34—East 9, Centre 13, West 12.

1	Kerry S.	Glencar '99 : rather frequent—Scully.
2	Kerry N.	Gneevgullia '98—P. Rather rare—Scully.
3	Cork W.	Inchigeela '58, J. Sullivan—*Cyb.* II. Rare—Phillips.
4	Cork Mid	Bluefort bog near Newmarket—Allin *Fl.* '83.
7	Tipp. S.	Ballinure '98—P.
8	Limrck.	Castleconnell bog '00—R. D. O'Brien !
9	Clare	Carrigaholt '86—Stewart. Lisdoonvarna ; Crusheen.
10	Tipp. N.	Cloughjordan '00—P. Frequent.
11	Kilkny.	Urlingford '98—P.
14	Queen's	Abbeyleix '98 : locally common—P.
15	Galw. SE.	Dalystown '98 : frequent in east, rare in west—P.
16	Galw. W.	Glen Inagh '98—Colgan. Very frequent.
17	Galw. NE.	Barbersfort '99 : frequent throughout—P.
18	King's	Geashill and Tullamore '96, and frequent in west—P.
19	Kildare	Nurney '97, Carbury '96—P.

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22	Meath	West of Navan '96 : in the north and west, rare—P.
23	Westmth.	Inny Junction, Twy L., '98—P. Lisclogher—*484*.
24	Longfd.	Trillickacurry '98 : common in the west—P.
25	Roscomn.	Corkip Lough '99 : frequent in south, rare in north—P.
26	Mayo E.	North of Claremorris '00—P. Frequent.
27	Mayo W.	Mallaranny '99—Marshall. Very frequent.
28	Sligo	Annaghmore '00—P. Widespread but rare.
29	Leitrim	Uragh Lough '99—P. North r., extreme south f.
30	Cavan	Near Killikeen and Mount Nugent '96—P.
31	Louth	Ardee bog '97—P.
32	Monaghn.	Kilmore Lake '00—Waddell.
33	Ferman.	Belleek, c. about Florencecourt, '00—P. Legland—*854*.
34	Dongl. E.	Throughout : locally frequent—*Fl. Don.*
35	Dongl. W.	Throughout : locally common—*Fl. Don.*
36	Tyrone	Omagh '96 : frequent—Miss Knowles.
37	Armagh	Near Portadown, and common along L. Neagh, '92—P.
38	Down	Cotton Moss "still"—*Fl. NE.* '88.
39	Antrim	Glarryford '99—Miss Knowles. Frequent.
40	L'derry	Garvagh '94—P. Frequent—*Fl. NE.*

The distribution of this plant depends entirely on that of the peat-bogs, and it varies in abundance accordingly. Rare on mountain bogs except in Antrim. Apparently absent in the south-east, from Cape Clear to Dublin.

Drosera intermedia Hayne.

Census 19—East 2, Centre 5, West 12.

1	Kerry S.	Cloonee '98—P. Frequent—Scully.
2	Kerry N.	Listowel '94 : frequent—Scully.
3	Cork W.	Dunmanway, Millstreet, '00 : frequent—Phillips.
9	Clare	Slieve Elva '95—Colgan. Near Kilrush—Stewart *863*.
10	Tipp. N.	Near Portumna '00—Phillips.
14	Queen's	Base of Cullenagh '97—P.
15	Galw. SE.	Woodford '00—Phillips. Castle Taylor—More *598*.
16	Galw. W.	Glen Inagh '98—Colgan. Very frequent.
17	Galw. NE.	Tuam '99 : frequent—P.
25	Roscomn.	Mount Talbot '97—P. Cloghan Lough—Foot '64 *328*.
26	Mayo E.	North of Claremorris '00—P. Frequent.
27	Mayo W.	Mallaranny '99—Marshall. Very frequent.
28	Sligo	East of Cliffony '00—P.

29	Leitrim	Drumod and Uragh Lough '99—P.
33	Ferman.	Florencecourt bogs c., and south of Belleek, '00—P.
34	Dongl. E.	Throughout: frequent locally—*Fl. Don.*
35	Dongl. W.	Throughout: locally common—*Fl. Don.*
37	Armagh	Annagarriff Lake '92—P. Along Lough Neagh only.
38	Down	By the Kilkeel River '92—P.

Exhibits a strong western tendency, irrespective of the distribution of bogs.

Hippuris vulgaris L. Mare's-tail.

Divisions all. Common.

Myriophyllum verticillatum L. Water-Milfoil (genus).

Census 25—East 11, Centre 10, West 4.

4	Cork Mid	Ballyphehane '96—Phillips.
5	Cork E.	Youghal '96: rare—Phillips.
6	Waterfd.	Clonea marsh '82—Hart *384*.
7	Tipp. S.	Ardmayle '98—P. Turtulla mill '82—Hart *385*.
8	Limrck.	Primrose Bank '97, W. Fogerty—Hb. L.F.C.! Limerick plentiful, Harvey—*Fl. Hib.* '36.
10	Tipp. N.	Roscrea '00—Phillips. Friar's L., Portumna, '97—P.
11	Kilkny.	Ballyragget '99, Urlingford, Johnstown—P.
13	Carlow	Goresbridge '99, Borris, Carlow—P.
14	Queen's	Mountmellick and Portarlington '96, Graigue—P.
15	Galw. SE.	Woodford '98—P. Portumna '00—Phillips.
16	Galw. W.	L. Corrib below Carn Seefin '99—P.
17	Galw. NE.	Barbersfort '99: frequent throughout—P.
18	King's	Shannon Harbour '98—P. Portarlington; Garryhinch.
19	Kildare	Robertstown '98—P. Not rare.
20	Wicklow	Murrough—*Guide* '78.
21	Dublin	Canal at Clondalkin '00: local—Colgan.
22	Meath	West of Navan, L. Sheelin, Enfield, '96—P.
23	Westmth.	Lough Iron '99—P. Rather common.
24	Longfd.	Longford '98, and common in west half—P.
25	Roscomn.	Rockville '99: in the north and south, local—P.
26	Mayo E.	Hollymount and Lough Carra '54—More *600*.
31	Louth	Ardee '97—P.

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34	Dongl. E.	Gallagh road—*Fl. Don.*
36	Tyrone	Favour Royal '87—Hart *392*.
39	Antrim	Portmore '74—Stewart.

Distinctly calcicole, favouring especially limy pools in the Central Plain. Rare in, or absent from all divisions where limestone does not predominate.

Myriophyllum spicatum L.

Census 35—East 14, Centre 10, West 11.

1	Kerry S.	Derrynane '96 : rare—Scully.
2	Kerry N.	Killarney '96 : rather rare—Scully.
3	Cork W.	Dunmanway '00 : frequent—Phillips.
4	Cork Mid	Lough of Cork '98 : frequent—Phillips.
5	Cork E.	Glanmire '00 : frequent—Phillips.
6	Waterfd.	Ballyscanlan Lough '99—P.
8	Limrck.	Lough Gur '00—P. King's I. '00—R. D. O'Brien !
10	Tipp. N.	Cloughjordan '00—P.
11	Kilkny.	Kilkenny '97—Mrs. Persse ! Lough Cullin '98—P.
12	Wexford	Wexford '96—Marshall. Not rare.
13	Carlow	Goresbridge '99—P.
14	Queen's	Mountmellick '00—Phillips. Not rare.
15	Galw. SE.	Castle Taylor—Mrs. Joyce !
16	Galw. W.	Ross Lake and Galway docks '99—P.
17	Galw. NE.	Killower Lough '99—P.
18	King's	Geashill '96, Edenderry, Shannon Harbour—P.
19	Kildare	Nurney '97—P.
20	Wicklow	Murrough '92, D. McArdle—*Hb.* Glasnevin !
21	Dublin	Portrane '00 : local—Colgan.
22	Meath	Lough Sheelin '96—P.
23	Westmth.	Lough Owel and Kilmaglish—Levinge '94 *484*.
24	Longfd.	Woodlawn '98 : frequent—P.
25	Roscomn.	Rockville '99—P. In north and south, local.
27	Mayo W.	Crossmolina and Rathroeen Lough '00—P.
28	Sligo	Ballysadare '00, L. Arrow—P. L. Gill—B. & V. *112*.
29	Leitrim	Lough Gill '99—P. L. Allen c. '84—Stewart *859*
30	Cavan	Mount Nugent '96—P.
33	Ferman.	Near Enniskillen '00—West !
34	Dongl. E.	Near Cloonea Lough—*Fl. Don.*
35	Dongl. W.	Fanet, Ardara, &c. : rare—*Fl. Don.*

36	Tyrone	Lough Neagh '96—Miss Knowles.
37	Armagh	Armagh, &c.: frequent in north, '92—P.
38	Down	Quoile '92—P. Frequent—*Fl. NE.*
39	Antrim	Portmore abundant '86—P. Frequent—*Fl. NE.*
40	L'derry	Kilrea '93—Mrs. Leebody. Common in R. Bann—P.

This and the next have not always been distinguished: their distribution is now given in full, as far as known. Both, no doubt, occur in all divisions.

Myriophyllum alterniflorum DC.

Census 37—East 12, Centre 13, West 12.

1	Kerry S.	Glencar '99: frequent—Scully.
2	Kerry N.	Listowel '99: frequent—Scully.
3	Cork W.	Skibbereen '97: frequent—Phillips.
4	Cork Mid	Ballyphehane '98: frequent.—Phillips.
5	Cork E.	Midleton '00: frequent—Phillips.
7	Tipp. S.	Thurles '98—P.
8	Limrck.	Curragh Chase '00—P.
9	Clare	Ennistymon '99—Miss Knowles. L. Senan—Stewart *803*.
10	Tipp. N.	Lough Ourna '99—P. Frequent.
11	Kilkny.	Near Ferrybank '99—P. Extreme south only.
12	Wexford	Macmine '97—Marshall.
13	Carlow	Borris '00—T. Hartley! Polmounty River '98—P.
14	Queen's	Emo '96—P.
15	Galw. SE.	Woodford '98—P. Widespread but local.
16	Galw. W.	Roundstone '96—P. Throughout, frequent.
17	Galw. NE.	Barbersfort '99: common—P.
18	King's	Geashill '96, Shannon Harbour '98—P.
19	Kildare	Nurney '97—P.
22	Meath	Whitewood Lough '97—P.
23	Westmth.	Twy Lough '98—P. Centre and west frequent.
24	Longfd.	Woodlawn '98: very frequent—P.
25	Roscomn.	Corkip Lough '99: frequent throughout—P.
26	Mayo E.	Ballymore L. '00, Claremorris—P. Clonbur—Marshall.
27	Mayo W.	Newport '99—Marshall. Frequent.
28	Sligo	Keishcorran '97, L. Arrow—P. Easkey L.—Colgan.
29	Leitrim	Tullaghan '97—P. L. Allen rare '84—Stewart *859*.
30	Cavan	Lough Oughter and Lough Ramor '96—P.
31	Louth	Ardee '97—P.

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32	Monaghn.	Creeve Lough and Annaghmakerig Lough '00—P.
33	Ferman.	Cleenishgarve '92—P. *691*. Frequent.
34	Dongl. E.	Throughout common—*Fl. Don.*
35	Dongl. W.	Throughout common—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles. Derg River '69—Stewart.
37	Armagh	Common '92—P.
38	Down	Clandeboye '91—P. Common—*Fl. NE.*
39	Antrim	Portglenone '99—Miss Knowles. Common—*Fl. NE.*
40	L'derry	Kilrea '94—P. Common—*Fl. NE.*

Commoner than the last, and frequently in streams, while *M. spicatum* prefers still waters. Strangely rare (or absent ?) in Wicklow and Dublin.

Callitriche verna L. Water-Starwort.

Divisions all. Common. The distribution of the segregates is still far from being worked out; *C. stagnalis* appears to be much the most abundant.

Callitriche vernalis Koch.

12	Wexford	Wexford '97—Marshall.
21	Dublin	Huntstown '94 : rare, Colgan—*Cyb.* II.
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Tanderagee '92, Lett—W.B.E.C. '94–5.
38	Down	Common—*Fl. NE.*
39	Antrim	Common—*Fl. NE.*
40	L'derry	Common—*Fl. NE.*

Possibly common, but the above records are the only ones which refer to the segregate.

Callitriche stagnalis Scop. (*C. platycarpa* Kuetz.).

Census 32—East 15, Centre 7, West 10.

1	Kerry S.	Kenmare '99 : common—Scully.
2	Kerry N.	Abbeydorney '99 : common—Scully.
3	Cork W.	Skibbereen '97 : common—Phillips.
4	Cork Mid	Donoughmore '96 : common—Phillips.
5	Cork E.	Youghal '00 : common—Phillips.
6	Waterfd	Carrickbeg '00—Phillips.
7	Tipp. S.	Carrick-on-Suir '00—P. Common.
10	Tipp. N.	Devil's Bit and Knockanora '98—P.
11	Kilkny.	Inistioge '98—P.

12	Wexford	Wexford '96—Marshall.
13	Carlow	Milford '98—P.
15	Galw. SE.	Portumna '98—P.
16	Galw. W.	Kylemore '98—Colgan. Maam '95—M. & S. *545*.
19	Kildare	Kilmeage and hills above Rathmore '98—P.
20	Wicklow	Common—*Guide* '78.
21	Dublin	Near Lusk '00 : common—Colgan.
22	Meath	Kildalkey and Slieve Bane '00—P.
26	Mayo E.	East of Foxford '00—P.
27	Mayo W.	Mallaranny '99—Marshall. Common.
28	Sligo	Ballysadare '97—P. Common.
29	Leitrim	Lough Gill '99—P.
30	Cavan	Lough Ramor '96—P.
31	Louth	Dunleer '00 : common—P.
32	Monaghn.	Creeve Lough '00—P.
33	Ferman.	Frequent on Lough Erne '81–2—Barrington *108*.
34	Dongl. E.	Dooagh—Hart '00.
35	Dongl. W.	Aranmore, &c. : probably common—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Tanderagee '94, Lett—W.B.E.C. '94–5.
38	Down	Anacloan '96, Lett—W.B.E.C. '96–7. F.—*Fl. NE.*
39	Antrim	Frequent—*Fl. NE.*
40	L'derry	Magilligan '97—Mrs. Leebody. Frequent—*Fl. NE.*

Probably common everywhere.

Callitriche hamulata Kuetz. (*C. pedunculata* DC.)

Census 21—East 10, Centre 5, West 6.

1	Kerry S.	Killarney '99 : frequent—Scully.
2	Kerry N.	Killarney '99 : rather frequent—Scully.
3	Cork W.	Baltimore '97 : frequent—Phillips.
4	Cork Mid	Near Macroom '98 : frequent—Phillips.
5	Cork E.	Dodge's glen '98 : rare—Phillips.
6	Waterfd.	Ballyscanlan Lake, Barrington—*Cyb.* II.
7	Tipp. S.	Bay Lake in Knockmealdowns '82–3—Hart *381*.
8	Limrck.	Rinekirk '85–6—Stewart *863*. Glenstal '80—Hart *300*.
12	Wexford	Rosslare '97—Marshall *539*. Chapel '89—B. & G. *101*.
16	Galw. W.	Maam '95—M. & S. *545*. Apparently local.
20	Wicklow	Lugnaquilla, Colgan ; Lough Dan, More—*Cyb.* II.
21	Dublin	Loughlinstown '94—Colgan *213*. Rare—Colgan.

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23 Westmth. Lough Deravaragh (H. & J. Groves)—Levinge '94 *484*.
27 Mayo W. Mallaranny '99—Marshall. Frequent.
32 Monaghn. Bragan '00—Waddell. Annaghmakerig Lough '00—P.
33 Ferman. Hay Island '92—P. Poulaphuca; Carrick.
35 Dongl. W. Gweedore Hotel: rare—*Fl. Don.*
37 Armagh Cusher River at Clare: common, '92—P.
38 Down Mournes ['89]—S. & P. *873*. Common—*Fl. NE.*
39 Antrim Frequent—*Fl. NE.*
40 L'derry Frequent—*Fl. NE.*

Appears to be decidedly calcifuge, and almost absent from the Central Plain.

Callitriche obtusangula Le Gall.

Census 12—East 5, Centre 4, West 3.

2 Kerry N. Killarney '90: rare—Scully.
3 Cork W. Enniskeane '96—Phillips.
5 Cork E. Youghal '96—Phillips.
10 Tipp. N. Dromineer '00—Phillips.
12 Wexford Rosslare frequent, and Churchtown, '97—Marshall *539*.
19 Kildare Maynooth '96—P.
20 Wicklow Murrough, Barrington—*Cyb.* II.
23 Westmth. Lough Deravaragh (H. & J. Groves)—Levinge '94 *484*.
26 Mayo E. North of Claremorris '00—P.
27 Mayo W. Newport and west of Castlebar '99—Marshall.
30 Cavan Near Lough Gowna '00—P.
38 Down Victoria Park '98—Druce. Killough '98—Stewart *869*.

Callitriche autumnalis L.

Census 13—East 5, Centre 3, West 5.

2 Kerry N. Killarney '99: very local—Scully.
12 Wexford Macmine Junction (*truncata* Guss.) '97—Marshall *539*.
15 Galw. SE. North of Gort '00—P.
26 Mayo E. Cong, Babington; east of Foxford, More—*Cyb.* I.
28 Sligo River at Sligo abundant, '84—B. & V. *112*.
32 Monaghn. Creeve L., Annaghmakerig L., L. Avaghon '00—P.
34 Dongl. E. Bridgetown and Bridge End (Hunter)—Hart '99 *405*.
35 Dongl. W. Cloonea Lough and frequent in Fanet—*Fl. Don.*
36 Tyrone Omagh and canal at Strabane '96—Miss Knowles.

37	Armagh	Near Markethill and in Lough Neagh '92—P.
38	Down	Derry L. '96, Lett—W.B.E.C. '96–7. Rare—*Fl. NE.*
39	Antrim	Bushfoot '87—P. Rare—*Fl. NE.*
40	L'derry	Kilrea '94—P. River Bann only—*Fl. NE.*

Very local, and chiefly in the north.

Peplis Portula L. Water Purslane.

Census 29—East 12, Centre 7, West 10.

1	Kerry S.	Kenmare '99 : rather frequent—Scully.
2	Kerry N.	Killarney '99 : frequent—Scully.
3	Cork W.	Skibbereen '97 : common—Phillips.
4	Cork Mid	Donoughmore '96 : frequent—Phillips.
5	Cork E.	Whitegate '98 ; frequent—Phillips.
6	Waterfd.	Clonea '99—P. Coumshingaun '82–3—Hart *383*.
9	Clare	Tullaher and Scattery Island '85–6—Stewart *863*.
10	Tipp. N.	Templemore '98—P.
12	Wexford	Wexford '96—Marshall. Saltees—Hart *384*. Kilmanock.
13	Carlow	South of Gowlin '99—P.
14	Queen's	Maryborough '96—P.
16	Galw. W.	Glen Inagh '98—Colgan. Frequent.
20	Wicklow	Lough Dan '94—P. Frequent.
21	Dublin	Glenasmole '00 : rare—Colgan.
24	Longfd.	Lough Gowna '00, Carn Clonhugh '98—P.
26	Mayo E.	Glendaduff '00—P. Clonbur '95—Marshall.
27	Mayo W.	Pontoon '00—P. Not common.
28	Sligo	Inishmurray '96—P.
29	Leitrim	Ballinamore, Garadice L., '00—P. L. Allen—*859*.
30	Cavan	Lough Ramor '96—P.
31	Louth	Belpatrick below Collon—*Ir. Fl.* '33.
32	Monaghn.	Rossmore '00—Waddell. Creeve Lough '00—P.
34	Dongl. E.	Inishowen and Ballyshannon : rare—*Fl. Don.*
35	Dongl. W.	Arranmore, &c. : throughout, rare—*Fl. Don.*
36	Tyrone	Mullaghcarn '96—Miss Knowles.
37	Armagh	Camlough, Lough Ross, Carrigatuke, '92—P.
38	Down	Downpatrick '90—P. Frequent—*Fl. NE.*
39	Antrim	Lough Beg '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Enagh Lough '94—Mrs. Leebody. Frequent—*Fl. NE.*

Strongly calcifuge in its distribution.

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Lythrum Salicaria L. Purple Loosestrife.

Divisions all. Common.

Epilobium angustifolium L. Rose Bay.

Census 7+(3)—East 4+(1), Centre (2), West 3.

(18 King's ‡Philipstown '96—P.)
20 Wicklow Cliffs over Lough Nahanagan '94—P.
(23 Westmth. ‡Abundant by railway on bog west of Killucan '99—P.)
29 Leitrim Glenade'96—Colgan. Truskmore, Arroo—B. & V. *112*.
34 Dongl. E. Glennagivney—*Fl. Don*.
35 Dongl. W. Bluestack Mountains—*Fl. Don*. Errigal—*Fl. Ulst*.
(37 Armagh ‡Not unfrequent, but near cottages, '92—P.)
38 Down Eagle Mountain and Blue Lough ['89]—S. & P. *873*.
39 Antrim Murlough Bay ! '00—Mrs. Swan. Frequent.
40 L'derry Umbra, D. Moore : frequent—*Fl. NE*.

Native in 20, 29, 34, 35, 38, 39, 40. Well established in 18, 23, and 37. Occurs as an escape in many other divisions.

Epilobium hirsutum L.

Divisions all. Common.

Epilobium parviflorum Schreb.

Divisions all. Common.

Epilobium montanum L.

Divisions all. Common.

†**Epilobium roseum** Schreb.

21 Dublin Garden at Dundrum, c. in '97, v.r. in '00—P.
31 Louth Wall at Queensborough '96—P.
37 Armagh Lurgan '00—Davies *272*.
38 Down Ballyskeigh near Lisburn '98—Davies *261*.
39 Antrim Glenmore near Lisburn '98—Davies *261*.

Claimed as native in the north-east by Mr. Davies.

Epilobium obscurum Schreb.

Divisions all. Common.

Epilobium palustre L.

Divisions all. Frequent.

Epilobium alsinefolium Vill.

29 Leitrim Glenade, in two spots, '84—Barrington *109*.

Circæa lutetiana L. Enchanter's Nightshade.

Divisions all. Common.

Circæa alpina L.

Census 11+(2)—East 5+(1), Centre 2, West 4+(1).

(16 Galw. W.? Ballynahinch—*Cyb.* I. Drimcong—Wade 1804 *902*.)
(20 Wicklow ‡Ballinrush Lodge near Roundwood '94—P.)
28 Sligo Lough Gill '99—P. Ben Bulben '82—Corry *248*.
29 Leitrim Glenade, L. Melvin, L. Gill '99—P. Arroo—*112*.
31 Louth Between Omeath and Carlingford '93—P.
33 Ferman. Inishdoney '00—West. Lower Lough Erne c.—P.
34 Dongl. E. Inishowen Head, Dickie—*Fl. Ulst.* '64.
35 Dongl. W. Lough Gartan, &c.: rare—*Fl. Don.*
36 Tyrone Strabane, Omagh, Newtownstewart, '96—Miss Knowles.
37 Armagh By L. Neagh south of Ardmore Point (Lett!)—P. *701*.
38 Down Tollymore Park '00—P. F. as a garden weed in N.—P.
39 Antrim Ballymena '99—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Limavady '94—Mrs. Leebody. Rare—*Fl. NE.*

Both the type and var. *intermedia* occur frequently as introduced garden weeds about Belfast, and the Wicklow plant has probably a similar origin. The native plant has a well-defined northern range.

Hydrocotyle vulgaris L. Marsh Pennywort.

Divisions all. Common.

Eryngium maritimum L. Sea Holly.

Census 18—East 9, Centre 0, West 9.

1 Kerry S. Derrynane '00: frequent—Scully.
2 Kerry N. Banna '92: rather frequent—Scully.
3 Cork W. Mizen Head '96: frequent—Phillips.

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5	Cork E.	Youghal '00; rare—Phillips.
6	Waterfd.	Dungarvan '99—P. Common.
9	Clare	Seafield '00, G. Fogerty—*Hb.* L.F.C.! Frequent, local.
12	Wexford	Courtown '94—P. Frequent.
15	Galw. SE.	Kilcolgan '97—Mrs. Joyce!
16	Galw. W.	Roundstone '96—P.
20	Wicklow	Arklow '94, and common on the Murrough—P.
21	Dublin	Sutton '00: frequent—Colgan.
22	Meath	Laytown to Boyne mouth abundant '96—P.
31	Louth	Bellurgan '00—Mrs. Swan. Common.
34	Dongl. E.	Clonmany '98—Hart *405*. North only—*Fl. Don.*
35	Dongl. W.	Glen Bay, &c.: local—*Fl. Don.*
38	Down	Ballykinler '00—Waddell. Chiefly in south—*Fl. NE.*
39	Antrim	Redbay '99—Miss Knowles. Chiefly in north—*Fl. NE.*
40	L'derry	Between Black rock and Portrush, D. Moore—*Fl. NE.*

Common on sandy shores on the east coast, local on the west, and apparently absent from Roundstone in Galway to Glen Bay in Donegal.

Sanicula europæa L. Wood Sanicle.

Divisions all. Frequent.

Conium maculatum L. Hemlock.

Divisions all: frequent. Chiefly near the sea, and about villages.

‡Smyrnium Olusatrum L. Alexanders.

Census 35—East 15, Centre 11, West 9.

Divisions all, *except 16 Galway W., 17 Galway NE., 25 Roscommon, 29 Leitrim, 30 Cavan.* Probably in all divisions, but rather rare except in certain districts near the coast.

Apium graveolens L. Wild Celery.

Census 24—East 13, Centre 1, West 10.

1	Kerry S.	Kenmare '99: rather frequent—Scully.
2	Kerry N.	Ballybunnion '99: frequent—Scully.
3	Cork W.	Skibbereen '97: frequent—Phillips.
4	Cork Mid	Crosshaven '00: common—Phillips.
5	Cork E.	Youghal '00: frequent—Phillips.
6	Waterfd.	Dungarvan '99—P. Coast frequent.

8	Limrck.	Askeaton '00—P. Shannon estuary c.—Stewart *863*.
9	Clare	Doonbeg '95—Miss Knowles. Inishmore; Shannon c.
11	Kilkny.	Granny '98—P. Local in the south.
12	Wexford	Carnsore '97—Marshall. Frequent.
15	Galw. SE.	Kilcolgan and Kinvarra '99—P.
17	Galw. NE.	Oranmore and Lough Atalia '99—P.
20	Wicklow	Wicklow '97—P. Frequent.
21	Dublin	Raheny '00—Colgan. Local.
22	Meath	Nanny and Boyne estuaries common '96—P.
27	Mayo W.	Newport '99—Marshall. Rosserk abbey '00—P.
28	Sligo	Ballysadare '99—P. Drumcliff '82—B. & V. *112*.
31	Louth	Dundalk and frequent southward '96—P.
34	Dongl. E.	Trawbreaga Bay, &c.: in north and south—*Fl. Don.*
35	Dongl. W.	Creeslough, &c.: local—*Fl. Don.*
37	Armagh	About Newry '92—P.
38	Down	Comber '00—P. Rare—*Fl. NE.*
39	Antrim	Redbay '99—Miss Knowles. Carrickfergus; Larne.
40	L'derry	Boom Hall '94—Mrs. Leebody. Magilligan and Foyle.

Locally round almost the whole coast.

Apium nodiflorum Reichb. fil.

Divisions all. Common.

Apium inundatum Reichb. fil.

Divisions all, *except 6 Waterford and 13 Carlow*. No doubt occurs in all, but is abundant in none.

Cicuta virosa L. Water-Hemlock.

Census 15—East 6, Centre 7, West 2.

17	Galw. NE.	Near River Suck at Donamon '97—P.
22	Meath	Cruicetown and Whitewood L. '97, L. Crew '96—P.
23	Westmth.	Lough Iron '99—P. Centre and west, not common.
24	Longfd.	Derrymacar L. '00, and frequent along the Shannon—P.
25	Roscomn.	Rockville '99, L. Key '97—P. Lanesboro'—B. & V. *113*.
29	Leitrim	Ballinamore '00—Somerville. Frequent in S. half.
30	Cavan	Tomkin Rd. '00—Somerville. L. Oughter, Farnham—P.
31	Louth	Ardee bog, Mansfieldstown, Blackmills—*Ir. Fl.* '33.

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32	Monaghn.	Drumreaske '00—Kane. F. in S.W.—Somerville, and P.
33	Ferman.	Belleisle '00—Tetley. Crum; Kinarla; west of Clones.
36	Tyrone	Arboe '97—Brenan! By L. Neagh '96—Miss Knowles.
37	Armagh	Mullaghmore L., L. Gilly, N. and E. margins,' 92—P.
38	Down	Tullycairne, Corry: very rare—*Fl. NE.*
39	Antrim	Portglenone '99—Miss Knowles. Bann and Lagan, rare.
40	L'derry	Bann occasionally, D. Moore—*Fl. NE.*

Northern half of Ireland, but absent from the west. Two lines joining Galway with Dublin and Derry cut off its whole range.

***Petroselinum sativum** Hoffm. Parsley.

Census 19—East 6, Centre 7, West 6.

1	Kerry S.	Beaufort '00—Scully.
2	Kerry N.	Ardfert abbey '99—Scully. Abbeydorney, &c.—*Cyb.* II.
3	Cork W.	Sherkin Island '96—Phillips. Rare.
4	Cork Mid	Blarney, Monkstown (Alexander)—Power *Fl.* '45.
5	Cork E.	Little Island '98: rare—Phillips.
6	Waterfd.	Wall near Ballybricken '00—Phillips.
7	Tipp. S.	Rock of Cashel '98—P. Near Clonmel—Anderson *22.*
8	Limrck.	Askeaton on rocks and ruins '00—P. Limerick—*Cyb.* I.
11	Kilkny.	Granny castle '98—P.
14	Queen's	Abbeyleix '00—Phillips.
21	Dublin	Ballyboghil church '94—Colgan. Dunsoghly '95—P.
23	Westmth.	Knock Drin established—Levinge '94 *484.*
24	Longfd.	Old castle on Elfeet Bay '00—P.
27	Mayo W.	Moyne abbey '00—P.
28	Sligo	Lough Dargan castle '99—P.
30	Cavan	Drumhawnagh, roadside fence, '00—P.
33	Ferman.	Crum Castle '81-2—Barrington *108.*
35	Dongl. W.	Rathmullan abbey—*Cyb.* II.
38	Down	Ringhaddy '00—P. Reagh I. (Waddell)—S. & P. *874.*

Naturalized on old buildings.

Carum verticillatum Koch. Whorled Caraway.

Census 6—East 2, Centre 0, West 4.

1	Kerry S.	Kenmare '99: frequent and locally abundant—Scully.
2	Kerry N.	Castlemaine '96: chiefly in the south—Scully.
3	Cork W.	Near Millstreet '00: rare, and in west only—Phillips.

35 Dongl. W. Lough Eske—*Fl. Don.*
39 Antrim Carnsampson '97, Giant's Causeway '95—P.
40 L'derry Abundant by R. Bann below Coleraine '95—P.

Very local, in the north and south.

***Carum Carui** L. Caraway.

Census 18—East 6, Centre 6, West 6.

Divisions all, *except 1, 2, 4, 5, 7 to 16, 18, 19, 21, 22, 29, 30, 31, 36.* Only a casual over the greater part of Ireland, becoming more abundant northward, and seems naturalized in Armagh and Antrim.

Sium latifolium L. Water-Parsnep (genus).

Census 11+(4)—East (3), Centre 8, West 3+(1).

8 Limrck. Shannon fields near Limerick '97, Bentley—*Hb.* L.F.C.!
9 Clare Ennis '79—Corry *240.* L. Derg—Hart! Corofin—*Cyb.* I.
10 Tipp. N. Frequent about Portumna '97—P.
15 Galw. SE. Portumna '00—Phillips. L. Derg near Woodford—P.
17 Galw. NE. R. Suck near Ahascragh '96—P. Tuam; Ballinasloe.
18 King's Banagher and Shannon Harbour '98—P.
23 Westmth. L. Ree ['85–6, B. & V.]—*484.* Mullingar—*Cyb.* I.
24 Longfd. About the mouth of the Inny '00—P.
25 Roscomn. Ballinasloe '99, Carrick—P. L. Ree—B. & V. *113.*
30 Cavan Tomkin Road '00—Somerville.
(31 Louth? Near Slane—*Ir. Fl.* '33.)
33 Ferman. Enniskillen c. '00, Ballycassidy River mouth '92—P.
(34 Dongl. E.? Culmore '35, D. Moore—*Cyb.* II.)
(39 Antrim L. Neagh, D. Moore [about 1835]; Portmore, Templeton, &c.—*Fl. NE.* and *Cyb.* I. Extinct?)
(40 L'derry Near Portstewart [?] and Lough Neagh, D. Moore [about 1835]—*Fl. NE.* and *Cyb.* I. Extinct?)

All the recent Irish records lie in the basins of the Shannon and Erne. Not seen in the Bann basin (39 and 40) since Lough Neagh was drained about 1850. The Slane, Culmore, Portstewart and other old records appear doubtful.

Sium angustifolium L.

Census 35+(1)—East 14, Centre 12, West 9+(1).

1 Kerry S. Derrynane '00: rare and local—Scully.
2 Kerry N. Ardfert '92: rather rare—Scully.

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3	Cork W.	Dunmanway '00 : rare—Phillips.
4	Cork Mid	Near Buttevant '00 : frequent—Phillips.
5	Cork E.	Midleton '00 : frequent—Phillips.
6	Waterfd.	Clonea marsh '99—P.
7	Tipp. S.	Fethard '98, Ardfinnan, Ballinure, Carrick—P.
8	Limrck.	Lough Gur '00—P. Drumkeen '80—Hart *369*.
9	Clare	Ennis and Doonbeg '85-6—Stewart *863*.
10	Tipp. N.	Nenagh '99 : frequent in west—P.
11	Kilkny.	Callan '00—Mrs. Persse! Frequent along Nore—P.
12	Wexford	Wexford '96—Marshall. Curracloa '81—Hart *371*.
13	Carlow	Carlow '98 : by the Barrow occasionally—P.
14	Queen's	Mountmellick '96, Grattan aqueduct—P. Durrow—*388*.
15	Galw. SE.	Loughrea '98 : frequent—P.
17	Galw. NE.	Tuam '99, Ballinasloe : frequent in centre—P.
18	King's	Tullamore '99—P. Centre and east, frequent.
19	Kildare	Rathangan '99 : frequent throughout—P.
20	Wicklow	Kilcoole '94—P. Murrough only.
21	Dublin	Canal at Clondalkin '00 : frequent—Colgan.
22	Meath	Bective '00 : frequent throughout—P.
23	Westmth.	Lough Owel '99—P. F. in centre, and c. on L. Ree.
24	Longfd.	Longford '98, and frequent by the Inny—P.
25	Roscomn.	Mote Park '97—P. Frequent by Suck and Shannon.
26	Mayo E.	Ballinrobe '94—Mrs. Persse! Cong '95—M. & S. *545*.
28	Sligo	Lough Gara and Rosses Point '97—P.
29	Leitrim	Carrick-on-Shannon '99—P.
30	Cavan	Mount Nugent '96—P.
31	Louth	Braganstown '97 : frequent in the centre—P.
32	Monaghn.	Drumreaske '00—Waddell.
33	Ferman.	Common near Enniskillen '81-2—Barrington *108*.
34	Dongl. E.	NW. of Ballyshannon '98—*Fl. Don.*
(35	Dongl. W. ?	Mt. Charles and Donegal—*Fl. Ulst.* ?—*Fl. Don.*)
38	Down	Strangford '97—P. Downpatrick and Killinchy f.
39	Antrim	Island-magee '96—P. L. Neagh, D. Moore—*Cyb.* I.
40	L'derry	Coleraine, Stewart—*Fl. NE.* Lough Neagh—*Cyb.* I.

A rare plant in many divisions, and thins out rapidly in the north.

‡**Ægopodium Podagraria** L. Gout-weed.

Divisions all. Generally common.

Pimpinella Saxifraga L. Burnet-Saxifrage

Census 36—East 15, Centre 12, West 9.

Divisions all, *except 1 Kerry S., 27 Mayo W., 29 Leitrim, 32 Monaghan.* A local plant in several divisions, but common in the majority. Very rare in West Cork and Kerry.

Pimpinella magna L. Greater Burnet-Saxifrage.

Census 14—East 3, Centre 5, West 6.

1	Kerry S.	Glencar '90 : rare and local—Scully.
2	Kerry N.	Killarney '99 : local, chiefly in south—Scully.
3	Cork W.	Castletownsend—Allin *Fl.* '83.
4	Cork Mid.	Near Waterfall '00 : rare—Phillips.
5	Cork E.	Youghal '00 : frequent—Phillips.
6	Waterfd.	Carrickbeg '00—P. Above Lismore—Hart *388.*
7	Tipp. S.	Limerick Junction '00—Phillips.
8	Limrck.	Kilmallock '00—Phillips. Very abundant in N.—P.
9	Clare	Scattery I. '93—O'Kelly! Local in Burren and Aran.
10	Tipp. N.	Roscrea '00—Phillips. About Newport '82—Hart *388.*
14	Queen's	Abbeyleix and Lisduff '00—Phillips.
16	Galw. W.	Moycullen to Oughterard abundant '99—P.
26	Mayo E.	Cong district c. '95—Marshall. Foxford, More—*Cyb.* I.
27	Mayo W.	West of Castlebar '99—Marshall.

Very local, but often in great abundance where it occurs. Confined to the south-western half of Ireland : a line drawn from Killala to Waterford defines its range.

Conopodium denudatum Koch. (*Bunium flexuosum* With). Pig-nut.

Divisions all. Common.

***Myrrhis odorata** Scop. Sweet Cicely.

Census 13—East 5, Centre 3, West 5.

16	Galw. W.	Ashford abundant '94—Mrs. Persse!
22	Meath	Bective and Oldcastle '96—P.
23	Westmth.	*Crossadree (Miss E. Reynell)—Levinge '94 *484.*
28	Sligo	*Ballysadare '99—P.
29	Leitrim	*Ballinamore '00—P.
32	Monaghan	Drumreaske '00—W. de V. Kane.

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34	Dongl.E.	*Manorcunningham: occasionally established—*Fl. Don.*
35	Dongl.W.	*Killybegs looking native: rare—*Fl. Don.*
36	Tyrone	‡Newtownstewart '96—Miss Knowles.
37	Armagh	Eglish, &c.: not rare, '92—P.
38	Down	Dundonald '98—P. †Frequent—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. †Frequent—*Fl. NE.*
40	L'derry	Magilligan '97: frequent—Mrs. Leebody.

Chiefly in the north-east, where it is naturalized.

Chærophyllum temulum L. Rough Chervil.

Census 17—East 10, Centre 6, West 1.

8	Limrck.	Lough Gur '00—P.
9	Clare	Finnevara '95, O'Kelly—*Cyb.* II.
10	Tipp. N.	Dromineer '99, Thurles '98—P.
11	Kilkny.	Between Kilkenny and Ballyragget frequent '99—P.
13	Carlow	Leighlinbridge '97—P. Barrow valley very frequent.
14	Queen's	Grantstown, and c. from Graigue to Maganey, '98—P.
18	King's	Edenderry '96—P.
19	Kildare	Kilkea Castle '99, Athy, Carbury, Thomastown—P.
20	Wicklow	Kilcoole and Killincarrig '70, Hart—*Cyb.* II.
21	Dublin	Lucan '96—P. Rare—Colgan.
22	Meath	Navan '00: common throughout—P.
24	Longfd.	Saint's Island '99—Miss R. Smith!
30	Cavan	Kilmore and Mount Nugent '96—P.
31	Louth	Braganstown '97—P. Frequent in the centre.
37	Armagh	Keady, and frequent by Lough Neagh, '92—P.
39	Antrim	Derrymore! '86—Stewart. Ballycastle—*Fl. Ulst.*
40	L'derry	Near Ballyronan, D. Moore—*Cyb.* I.

Rather partial to the vicinity of houses, but is undoubtedly native in many of its stations. Decreases rapidly westward.

Scandix Pecten-Veneris L. Shepherd's Needle.

Census 31—East 13, Centre 10, West 8.

1	Kerry S.	East of Dingle '83—Hart *381*.
2	Kerry N.	‡Abbeydorney '00: rare and local—Scully.
4	Cork Mid	Crosshaven '98: frequent—Phillips.
5	Cork E.	Ballycotton '98: frequent—Phillips.
6	Waterfd.	Ardmore '82—Hart *384*.
7	Tipp. S.	Farranaleen '98—P.

8	Limrck	Hollypark '00, R. D. O'Brien! Askeaton—Stewart *863*.
9	Clare	Gleninagh '95—J. A. Audley! Kilrush—Stewart *863*.
10	Tipp. N.	Nenagh '98—P.
11	Kilkny.	Thomastown '98—P. Rare.
12	Wexford	Enniscorthy '98—P. Frequent.
14	Queen's	Grantstown '98: frequent—P.
15	Galw. SE.	Gort '00—Phillips. Garryland, Loughnahulla, '99—P.
16	Galw. W.	Kilbeg ferry '99—P.
18	King's	Frankford '00, Shannon Harbour, Tullamore—P.
19	Kildare	Nurney and Athy '97—P.
21	Dublin	Lusk '93: rare—Colgan.
22	Meath	Navan, Oldcastle, '96—P. Ardbraccan—*Hb.* S. & A.M.
24	Longfd.	Newtowncashel '00, Woodlawn '98—P.
25	Roscomn.	East of Ahascragh '96—P. Lough Ree—B. & V. *113*.
26	Mayo E.	Claremorris '00—P. Ballinrobe '92—Mrs. Persse!
28	Sligo	Ballymote '97—P. Dromore West '96—Colgan.
30	Cavan	Mount Nugent '96—P.
31	Louth	Dundalk '96—P.
32	Monaghn.	Clontibret '00—Waddell. Monaghan '00—Somerville.
34	Dongl. E.	Ballyliffan '93—P. *721*. Throughout, rare—*Fl. Don.*
35	Dongl. W.	Doorin Point, &c.: throughout, rare—*Fl. Don.*
37	Armagh	Loughgall, &c.: frequent, '92—P.
38	Down	Clay Lake '91—P. Frequent—*Fl. NE.*
39	Antrim	Gobbins '92—P. Frequent—*Fl. NE.* and *874*.
40	L'derry	Magilligan '94—Mrs. Leebody. Rare—*Fl. NE.*

Probably in all divisions, but not common in any. Stated by Allin to be common in Cork West, but not seen in that division by Phillips.

Anthriscus vulgaris Pers. Beaked Parsley.

Census 24+(3)—East 12+(2), Centre 8, West 4+(1)

2	Kerry N.	Tullig '90—Scully.
(4	Cork Mid	Blackrock—Allin *Fl.* Carrigaline. Casuals—Phillips.)
(5	Cork E.	Ballyvodock—Allin *Fl.* Casual—Phillips.)
6	Waterfd.	Carrickbeg '00—Phillips. Clonmel—*Cyb.* II.
7	Tipp. S.	Fethard '97—P. Carrick-on-Suir '00—Phillips.
9	Clare	Inishmore '69—Hart *365*.
10	Tipp. N.	Roscrea '00—Phillips.
11	Kilkny.	Kilkenny '99—P. Frequent, local.
12	Wexford	Rosslare '97—Marshall. South, frequent.

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3 Carlow Tullow '99—P. Barrow valley frequent.
4 Queen's Abbeyleix '98, Maryborough, Mountrath—P.
5 Galw. SE. †Woodford '98—P.
7 Galw. NE. Dunmore '00—P.
8 King's Philipstown '96, and frequent in the west—P.
9 Kildare Monasterevan and Athy '99—P.
0 Wicklow Arklow '94—P. Frequent in NE. corner.
1 Dublin Rush '00: local—Colgan.
2 Meath Trim '96, and frequent on the coast—P.
3 Westmth. Killinure Lough '98: centre and west, rare—P.
4 Longfd. Ballymahon '00—P. West only, rare.
5 Roscomn. Rindown castle '98, Galey, Athlone—P.
6 Mayo E. Ballinrobe '90—Mrs. Persse! Foxford '00—P.
1 Louth Greenore '00, Louth—P. F. round Dundalk Bay.
34 Dongl. E. *Culmore "casually" W. E. Hart—*Fl. Don.*)
8 Down Killinchy '99—Waddell. Frequent on coast—*Fl. NE.*
9 Antrim Larne '89—P. Rare—*Fl. NE.*
0 L'derry. Magilligan '97—Mrs. Leebody.

Partial to sandy soils, and consequently found chiefly near the a: occasionally abundant on eskers in the Central Plain. Favours lso the vicinity of villages, and ruins. Thins out in the north and uth.

Anthriscus sylvestris Hoffm. Cow-Parsley.

Divisions all. Occasionally local, generally abundant.

†Fœniculum officinale All. Fennel.

Census 17+(1)—East 10+(1), Centre 2, West 5.

Kerry S. *Valentia '92: rare and local—Scully.
Kerry N. *Barrow Harbour '96: rare—Scully.
Cork W. Near Baltimore '96: rare—Phillips.
4 Cork Mid Carrigaline '00 (Scully): frequent on coast—Phillips.
5 Cork E. Youghal, &c. '00: common near the sea—Phillips.
6 Waterfd. Tramore '97—Mrs. Persse. Coast local.
7 Tipp. S. ‡SE. of Slievenaman '00—P. Clonmel—*Cyb.* I.
8 Limrck. Askeaton looking wild '00—P. Foynes—Stewart *863*.
9 Clare Near Quin abbey '79—Corry *240*.
11 Kilkny. Thomastown '98—P.
12 Wexford *Kilmichael Point, and Curracloa, '81—Hart *371, 384*.

13 Carlow ‡Leighlinbridge '98—P.
16 Galw. W. *Near Galway, Melville—*Cyb.* I.
20 Wicklow ‡Mizin Head '96, ‡Bray, ‡Delgany—P.
21 Dublin *Balrothery '00 : local—Colgan.
22 Meath ‡Mornington '96—P.
38 Down Killough Bay looking native, Stewart—*Fl. NE.*
(39 Antrim *Curran, D. Moore—*Cyb.* I. Extinct—*Fl. NE.*)

Abundant on wild ground in some of its southern stations, but possibly an escape from cultivation in all cases.

Crithmum maritimum L. Samphire.

Census 18—East 9, Centre 1, West 8.

1 Kerry S. Derrynane '00 : frequent—Scully.
2 Kerry N. Rahaneen '92 : rather frequent—Scully.
3 Cork W. Baltimore '97 : common—Phillips.
4 Cork Mid Crosshaven '00 : common—Phillips.
5 Cork E. Youghal '00 : common—Phillips.
6 Waterfd. Dungarvan '99—P. Frequent.
8 Limrck. Shannon above Kilrush '85–6—Stewart *863*.
9 Clare Ballinalackan '00—Miss Knowles. Burren and Aran c.
11 Kilkny. Snowhill '99—P.
12 Wexford Carnsore '97—Marshall *539*. Very frequent.
16 Galw. W. Roundstone '96—P. Not common.
20 Wicklow Bray Head '94—P. ? Frequent.
21 Dublin Howth '00 : local—Colgan.
27 Mayo W. Achill Island '99—Colgan.
31 Louth Clogher Head ! '99—Miss R. Smith.
34 Dongl. E. Knockglass '98—Hart *405*. Malin peninsula—*Fl. Don.*
35 Dongl. W. Sessiagh Bay '98—Hart *405*. Local—*Fl. Don.*
38 Down St. John's Point '98—B.N.F.C. *136*. Carnalea and Kearney Point—Stewart *866*.

Very local on the coasts, being rare in many divisions, and apparently absent from several, notably Sligo, Antrim, and Derry. Ascends the Shannon and Barrow estuaries for some miles.

Œnanthe fistulosa L. Water-Dropwort (genus).

Census 26—East 15, Centre 7, West 4.

4 Cork Mid Ballyphehane '96 : rare—Phillips.
5 Cork E. Near Buttevant '00 : rare—Phillips.

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Waterfd.	Cappoquin '99—P. Near Bunmahon '82—Hart *384*.
Tipp. S.	Carrick-on-Suir '00—P.
Limrck.	Limerick '99—Somerville. Frequent about Limerick.
Clare	Ennistymon '99—Miss Knowles.
Kilkny.	Thomastown, Granny, '98—P. Ballyneale—Hart *388*.
Wexford	Enniscorthy '81—Hart *371*. Alderton; Kilmanock.
Carlow	Borris '99, St. Mullin's, Polmounty River—P.
Queen's	Canal at Grattan aqueduct '98—P.
Galw. SE.	Portumna '00—Phillips.
Galw. NE.	Clare River near Tuam '99—P.
King's	Banagher '98—P.
Kildare	Athy '97, Kilcock, Monasterevan—P.
Wicklow	Newcastle abundant '94—P.
Dublin	Baldoyle '00: local—Colgan.
Meath	Beauparc '00, Bective, Drogheda—P.
Westmth.	L. Ennel '97—Carr. Occasionally on Lough Ree.
Longfd.	Ballymahon '00—P.
Louth	Kerney's Cross and Ardee bog '97—P.
Dongl. E.	Between Inch and Bridgetown—*Fl. Don.*
Tyrone	By Lough Neagh '96—Miss Knowles.
Armagh	Canal near Portadown and frequent by L. Neagh '92—P.
Down	Along the Newry canal, Stewart—*Fl. NE.*
Antrim	Portglenone '99—Miss Knowles. Bann basin only.
L'derry	Coleraine '96—Mrs. Leebody. East and north margins.

Very rare in the north-west, from Mayo to Derry. Absent from rry and apparently also from Cork West (Phillips), though stated Allin to occur there.

Œnanthe pimpinelloides L.

Cork E.	Trabolgan '99—Phillips. See Phillips *666*.

Possibly elsewhere, passed over as *Œ. Lachenalii*.

Œnanthe Lachenalii C. Gmel.

Census 24—East 12, Centre 1, West 11.

Salt marshes in nearly every maritime and sub-maritime division, mely—1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16, 17, 20, 21, 22, 27, 28, 34, 35, 38, 39, 40.

Œnanthe crocata L.

Census 33—East 14, Centre 8, West 11.

1	Kerry S.	Kenmare '98—P. Frequent—Scully.
2	Kerry N.	Abbeydorney '99 : frequent—Scully.
3	Cork W.	Macroom '00 : common—Phillips.
4	Cork Mid	Donoughmore '96 : common—Phillips.
5	Cork E.	Whitegate '00 : common—Phillips.
6	Waterfd.	Dungarvan '99—P. Common throughout.
7	Tipp. S.	Fethard '98 : common in the south—P.
8	Limrck.	Askeaton '00—P. Common in the north.
9	Clare	Inchiquin Lough '99—Miss Knowles. F. in south.
10	Tipp. N.	Youghal Bay and base of Keeper Hill '99—P.
11	Kilkny.	Lough Cullin '99—P. Frequent by the Barrow.
12	Wexford	Enniscorthy '98—P. Frequent throughout.
13	Carlow	Carlow '99 : frequent throughout—P.
15	Galw. SE.	Dalystown '98, Lough Cooter '00—P.
16	Galw. W.	Roundstone '96—P. Clonbur ; Leenane.
20	Wicklow	Avondale '99—P. Frequent throughout.
21	Dublin	Kelly's Glen '94 : local—Colgan.
22	Meath	Navan '00, and frequent by the Boyne ; Laytown—P.
26	Mayo E.	Ballinrobe '94—Mrs. Persse ! Clonbur '95—Marshall.
27	Mayo W.	Mallaranny '99—Marshall. Frequent.
28	Sligo	Inishmurray '96—P. *745*.
29	Leitrim	Glenade '99, and on the coast—P.
30	Cavan	Lough Ramor and Mount Nugent '96—P.
31	Louth	Dunleer '00 : frequent—P.
32	Monaghn.	Ballybay '00, Castleblayney '96—P.
33	Ferman.	Ballycassidy R. '00—West. L. Erne f.—Barrington *108*.
34	Dongl. E.	Keenagh River '98—Hart *405*. Rare—*Fl. Don.*
35	Dongl. W.	Dunglow, &c. : local—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Common throughout '92—P.
38	Down	Conlig '00—P. Common—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Common—*Fl. NE.*
40	L'derry.	Eglinton '98—Mrs. Leebody. Common—*Fl. NE.*

A local plant, and in a broad sense calcifuge. The divisions from which it is not on record (14, 17, 18, 19, 23, 24, 25) are those in which limestone most prevails : those in which it is most frequent (3, 4, 5, 6, 12, 13, 20, 37, 38, 39, 40) are characterized by an absence of limestone.

Œnanthe Phellandrium Lamk. Horsebane.

Census 33—East 14, Centre 13, West 6.

Divisions all, *except 1 and 2 Kerry, 3 Cork W., 12 Wexford, 16 Galway W., 34 and 35 Donegal.* Abundant throughout the Central Plain, thinning out towards the hilly margins, and absent from Kerry and Donegal.

Æthusa Cynapium L. Fool's Parsley.

Census 37—East 15, Centre 12, West 10.

Divisions all, *except 27 Mayo W., 28 Sligo, 32 Monaghan.* Probably universal. Frequent.

Ligusticum scoticum L. Scottish Lovage.

Census 5—East 3, Centre 0, West 2.

34 Dongl. E. Lenan '98—Hart *405*. North only—*Fl. Don.*
35 Dongl. W. Doaghmore '98—Hart *405*. Extreme N. only—*Fl. Don.*
38 Down Mew Island, Corry; Donaghadee; Copelands—*Fl. NE.*
39 Antrim Island-magee '99—Lilly! Garron Point; Bushfoot.
40 L'derry E. of Portstewart '97, Downhill '94—Mrs. Leebody!

Coast from Tory Island in Donegal to Donaghadee in Down.

Angelica sylvestris L.

Divisions all. Common.

***Peucedanum sativum** Benth. Wild Parsnep.

Census 25—East 11, Centre 6, West 8.

2 Kerry N. *Tralee '92: an escape—Scully.
3 Cork W. †Rathclaren—Allin *Fl.* '83. Rare—Phillips.
4 Cork Mid ‡Between Dooniskey and Macroom '97: rare—Phillips.
5 Cork E. ‡Glanworth '94—P. Rare—Phillips.
6 Waterfd. Ardmore '82—Hart *384*. Frequent on the coast.
7 Tipp. S. Fethard '00—Phillips. *Base of Slievenaman '00—P.
8 Limrck. Askeaton '97—W. Fogerty! Foynes casual—*863*.
9 Clare Doonbeg well established '00—Miss Knowles. Rare.
11 Kilkny. Near Lismaine house established '99—P.
12 Wexford Rosslare '97—Marshall *539*. Established and frequent.

14	Queen's	S. of Portarlington c. and established '00: rare—P.
15	Galw. SE.	Castle Taylor—More '55 *598*.
16	Galw. W.	Oughterard in cultivated ground '56—Hind *423*.
18	King's	Clara, common on esker, '99: *Shannon Harbour—P.
19	Kildare	Ballitore, an escape, Chandlee and Carroll—*Cyb.* I.
20	Wicklow	Murrough in cultivated fields, D. Moore—*Cyb.* I.
21	Dublin	*Finglas quarry naturalized '95, Colgan—*Cyb.* II. Rare.
22	Meath	Mayden Tower on sandy banks '94—P.
25	Roscomn.	Esker west of Athlone abundant '98—P.
27	Mayo W.	Newport '82—Hart *380*.
33	Ferman.	Drumskew, an escape, '00—West.
34	Dongl. E.	‡Donegal abbey—*Fl. Don.*
35	Dongl. W.	‡Rathmullan and Drimnacraig—*Fl. Don.*
39	Antrim	Stoneyford '88—P. *696*. Very rare, and casual.
40	L'derry	Magilligan abundant and naturalized '95—P.

Naturalized and locally abundant on the coasts of Waterford, Wexford and Derry, and on esker ridges and dry banks here and there in the Central Plain, as in Queen's Co., King's Co., and Roscommon.

Heracleum Sphondylium L. Cow-Parsnep; Hogweed.

Divisions all. Common.

Daucus Carota L. Wild Carrot.

Divisions all. Common, particularly on the coast.

Caucalis Anthriscus Huds. Hedge-Parsley.

Divisions all. Common.

Caucalis nodosa Scop.

Census 26—East 13, Centre 6, West 7.

1	Kerry S.	Kenmare '99: rare—Scully.
2	Kerry N.	Ballybunnion '99: rather frequent—Scully.
3	Cork W.	Baltimore '96: frequent in the south—Phillips.
4	Cork Mid	Blackrock '00: frequent—Phillips.
5	Cork E.	Ballyvodock '00: frequent—Phillips.
6	Waterfd.	Dungarvan to Bunmahon '00—P. Mine Head—*384*.
7	Tipp. S.	Cahir frequent, Fethard, '97—P.
8	Limrck.	Lough Gur '00—P. Frequent in the north.

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9	Clare	Fanore '00—Miss Knowles. Frequent in N., rare in S.
10	Tipp. N.	Nenagh '99—P.
11	Kilkny.	Near Jenkinson House '99—P.
12	Wexford	Enniscorthy '98—P. Frequent in the south.
13	Carlow	Leighlinbridge '99, Milford, Borris, Killedmond—P.
15	Galw. SE.	Carrowmore '99, Kinvarra—P. Portumna '96—Colgan.
17	Galw. NE.	Rinmore '00—Phillips. Oranmore '99—P. Headford.
20	Wicklow	Wicklow '97, Bray '94—P.
21	Dublin	Old Bawn '00: rare—Colgan.
23	Westmth.	Athlone '99—P.
24	Longfd.	Ballymahon '00—P.
25	Roscomn.	Castle Sampson '99—P.
31	Louth	Dundalk and frequent in NE. '00—P.
34	Dongl. E.	‡Greencastle, W. E. Hart—*Fl. Don.*
37	Armagh	Dromantee '93, Jonesborough, Portadown—P.
38	Down	North of Portaferry '97—P. *767*. F. along the coast.
39	Antrim	Whitepark Bay '97—P. Rare, and on the coast only.
40	L'derry	Ballyronan, W. T. Whan—*Fl. Ulst.* '64.

Hedera Helix L. Ivy.

Divisions all. Abundant.

Cornus sanguinea L. Dogwood.

Census 13+(6)—East 3+(3), Centre 5+(2), West 5+(1).

(3	Cork W.	*Cullenagh Lake—Allin *Fl.* '83.)
(4	Cork Mid	*Near Passage '00: rare—Phillips.)
(5	Cork E.	*Whitegate '00: rare—Phillips.)
8	Limrck.	Limestone rocks at Askeaton and Mullagh c. '00—P.
9	Clare	Ballinalackan '00—O'Brien. Burren & Aran f., native.
10	Tipp. N.	Bounla I. appearing native '96, Colgan—*Cyb.* II.
11	Kilkny.	Kilkenny '00—Phillips. Along the Nore f.—P.
13	Carlow	Near Borris, in a hazel copse and by Barrow, '99—P.
15	Galw. SE.	Limestone rocks at L. Fingall and near Gort '99—P.
18	King's	Portarlington c. '84—Hart *383*. †Philipstown—P.
19	Kildare	Athy '97, ‡Kilkea Castle, ‡near Baltinglass—P.
23	Westmth.	Killinure Point '99—P. Knock Ross—Levinge *484*.
25	Roscomn.	†Mote Park '97—P.
28	Sligo	Keishcorran cliffs '97—P. Seefin, Colgan—*Cyb.* II.
29	Leitrim	L. Gill on limestone rocks, ‡Rinn L., '99—P.
(32	Monaghn.	Croaghan wood—W. de V. Kane.)
34	Dongl. E.	By the Erne, etc.: extreme S. only—*Fl. Don.*

(36 Tyrone ‡Omagh '96—Miss Knowles.)
(37 Armagh Loughgall '53—More *600*. Not seen '92—P.)

Undoubtedly native on limestone "crags," rocks, and cliffs in 8, 9, 10, 15, 23, 28, 29, and 34. I have no doubt that the Dogwood is indigenous also along the Nore and Barrow (11, 13, 18, 19), where it grows in thick copses of Hazel, Holly, Blackthorn, and other native trees. The stations in 3, 4, 5, 32, 36, 37 are very dubious.

Adoxa Moschatellina L. Moschatel.

39 Antrim Cave Hill '86, P.; Milewater '78, Corry—*Fl. NE.*

Nearly extinct in its only Irish habitats.

Sambucus nigra L. Elder.

Divisions all. Though showing a preference for ruins and the sites of former habitations, this tree appears to be an original native, if not throughout the country, at least in limestone districts.

***Sambucus Ebulus** L. Dwarf Elder.

Census 32—East 12, Centre 9, West 11.

1 Kerry S. Near Derrynane '89 : rare—Scully.
2 Kerry N. Ardfert '99 : rare—Scully.
3 Cork W. Goleen '96 : rare—Phillips.
4 Cork Mid Near Bandon (Allman)—Allin *Fl.* '83. Rare—Phillips.
5 Cork E. Youghal '00 : rare—Phillips.
6 Waterfd. Dunmore '97—P.
7 Tipp. S. Fethard '00—Phillips. Clonmel; Tipperary; Carrick.
8 Limrck. Mullagh '00—P. Common in the north.
9 Clare Ballyvaughan '00—Miss Knowles. Frequent.
10 Tipp. N. Borrisokane '00—Phillips. Frequent.
11 Kilkny. Thomastown '00—Phillips. Rare.
12 Wexford Mangan, Killanne, Rathduff—Moffat '89 *552*.
13 Carlow Near Milford '99—P. Leighlinbridge—Hart *383*.
15 Galw. SE. Castle Taylor—More '55 *598*.
17 Galw. NE. Annaghdown and Dunmore '00—P.
18 King's Near Moneygall '82—Hart *385*.
20 Wicklow Glendalough—Mrs. Wynne '00. Frequent in NE.
21 Dublin Sutton—Hart '97 *403*.
25 Roscomn. Termonbarry '99—Colgan.
26 Mayo E. Claremorris '00—P. Ballinrobe '90—Mrs. Persse!
27 Mayo W. Burrishoole '99—G. P. Farran.

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28 Sligo Castlerock '96—Colgan.
29 Leitrim Manorhamilton, Drumahaire, Tullaghan, '99—P.
32 Monaghn. Stranoodan, Mt. Anketell, '00—Kane. Culloville—P.
33 Ferman. Castle Hume, Temple Nephern, '00—West. Belcoo—P.
34 Dongl. E. Gleneely '98—Hart *405*. N. and S., rare—*Fl. Don.*
35 Dongl. W. Rosapenna, &c.: north and south, rare—*Fl. Don.*
36 Tyrone By Lough Neagh '96—Miss Knowles.
37 Armagh Eglish and Loughgall '92—P. Armagh—*Fl. Ulst.*
38 Down Ballynahinch '00—P. Frequent—*Fl. NE.*
39 Antrim Ballymena '99—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Agivey, D. Moore: frequent—*Fl. NE.*

Now frequent over the country, but obviously originally introduced.

Viburnum Opulus L. Guelder Rose.

Divisions all. Frequent.

Lonicera Periclymenum L. Woodbine; Honeysuckle.

Divisions all. Common.

Rubia peregrina L. Madder.

Census 16—East 6, Centre 2, West 8.

1 Kerry S. Derrynane '00: local—Scully.
2 Kerry N. Killarney '99: local, chiefly in south—Scully.
3 Cork W. Cape Clear '96: frequent in the south—Phillips.
4 Cork Mid Crosshaven '00: frequent near the coast—Phillips.
5 Cork E. Whitegate '00: frequent near the coast—Phillips.
6 Waterfd. Dungarvan, Ballyvoyle, '99—P. Coast c.—Hart *384*.
8 Limrck. Askeaton '00—P. Ringmoylan, Foynes—Stewart *863*.
9 Clare Lisdoonvarna '00—Miss Knowles. Burren and Aran c.
12 Wexford Arthurstown—B. & M. '93 *103*. Extreme SW. only, f.
15 Galw. SE. Lough Fingall, &c., '99—P. SW. only, local.
16 Galw. W. Ross district f., '99—P. Little Killery '98—Colgan.
17 Galw. NE. Terryland River and Menlo '99—P.
20 Wicklow South end of Bray Head '98—P.
21 Dublin Howth '00, Dalkey '95—Colgan.
26 Mayo E. S. of L. Mask '95—M. & S. *545*. L. Carra—Ball *93*.
27 Mayo W. Mweelrea '98—Colgan.

Locally up the west coast as far as the Killeries, and the east coast as far as Howth. Never far from the sea. Flourishes equally on or off the limestone.

Galium boreale L. Bedstraw (genus).

Census 22—East 4, Centre 7, West 11.

1	Kerry S.	Near the Gap of Dunloe '90—Scully.
2	Kerry N.	Killarney '00 : locally about the lakes—Scully.
6	Waterfd.	Croan bog near Clonmel, about 1850—Miss S. Grubb!
9	Clare	Ballyvaughan '95—Colgan. Locally abundant in north.
10	Tipp. N.	Dromineer '00—Phillips. Abundant on L. Derg.
15	Galw. SE.	Lough Cooter '00—P. C. in SW., and along Shannon.
16	Galw. W.	Ross Lake '99 : abundant along E. margin—P.
17	Galw. NE.	SW. of Knockmae, and common on L. Corrib, '99—P.
23	Westmth.	Hare Island '99 : common on Lough Ree—P.
24	Longfd.	Elfeet Bay '00 : common on Lough Ree—P.
25	Roscomn.	Lough Ree frequent '98 ; Lough Gara rare '97—P.
26	Mayo E.	L. Mask '97—Kane. L. Mask c. L. Carra—Ball *93*.
27	Mayo W.	L. Beltra '99—Colgan *221*. L. Conn common; L. Cullin.
28	Sligo	Lough Gara '97—P.
29	Leitrim	L. Melvin, Harvey—*Cyb.* II. L. Bofin, Dyer—*614*.
33	Ferman.	Garrison on L. Melvin '00—P. Lower L. Erne common.
34	Dongl. E.	Near the River Erne only—*Fl. Don.*
35	Dongl. W.	St. John's Point and near Glen—*Fl. Don.*
36	Tyrone	By Lough Neagh '96—Miss Knowles.
37	Armagh	Lough Neagh frequent '92—P.
39	Antrim	Glenariff '93—Shoolbred *837*. Locally frequent.
40	L'derry	Clontygearagh mountain ; Magilligan ; L. Neagh and L. Beg f.—*Fl. NE.*

Chiefly on the western limestones, and along the Shannon and Erne, and round Lough Neagh. In Antrim and Derry alone it occurs as an upland plant, along mountain streams and on cliffs.

†**Galium Cruciata** Scop. Crosswort.

33	Ferman.	Colebrooke '69 (T. O. Smith)—More *614*.
38	Down	Downpatrick rath '00—P.

Galium verum L. Lady's Bedstraw.

Divisions all. Abundant.

‡**Galium erectum** Huds.

Census 8—East 6, Centre 1, West 1.

5	Cork E.	†Trabolgan '98 : rare—Phillips.
9	Clare	Inishmore '94, O'Kelly—*Cyb.* II.

12 Wexford Near Killurin, Hart—*Cyb.* II.
19 Kildare Kilkea Castle (J. Douglas)—More *614*.
21 Dublin Sutton '96—P. Rare—Colgan.
23 Westmth. Coosan Lough '98—P.
38 Down Aghaderg '86 (Lett), and Saintfield—Davies *259*.
39 Antrim Cullybackey '99—Miss Knowles. Rare—Davies *259*.

Commoner than the above scanty notes would indicate, but authenticated records are rare. Probably introduced with grass-seed, now naturalized.

†Galium Mollugo L.

Census 16—East 8, Centre 6, West 2.

6 Waterfd. †Cappagh '99—P. ‡Blenheim '89—B. & G. *101*.
7 Tipp. S. ‡Gravel-pit in Vale of Aherlow '00—P.
9 Clare Ballyvaughan '95—Colgan.
10 Tipp. N. †Roadside at Cloughjordan '00—P.
12 Wexford ‡Alderton '89—B. & G. *101*. †Killoughrim—Moffat *552*.
14 Queen's †By railway for 2 miles E. of Portarlington c. '00—P.
18 King's †Lawn at Geashill '96—P.
20 Wicklow Rathdrum '83, Glencree, Hart—*Cyb.* II. Vallombrosa.
21 Dublin ‡Crumlin, &c. '00: rare—Colgan.
22 Meath By the Boyne east of Hill of Down '00—P.
24 Longfd. Saint's Island looking wild '00—P.
31 Louth Sandy banks at Greenore '00—P.
35 Dongl. W. *Rosapenna '96—Hart *401*.
36 Tyrone Strabane (var. *insubricum*) '96—Miss Knowles.
37 Armagh Tanderagee '92—P. Near Armagh—W. F. Johnson!
40 L'derry Eglinton '97 (Mrs. Leebody)—Davies *259*.

Widespread, but generally in places to which it may have spread from sown stock.

Galium saxatile L.

Divisions all. Strongly calcifuge, and distributed accordingly, being rare and local in those counties where limestone most prevails; but in all, on patches of non-calcareous rocks or on the edges of bogs, it finds a home.

Galium sylvestre Poll.

Census 6—East 0, Centre 0, West 6.

2 Kerry N. Abbeydorney '99: rare and local—Scully.
9 Clare Inishmore '95—P. Burren and Aran common.

15 Galw. SE. Garryland and abundant south of Kinvarra '00—P. Castle Taylor '79—Corry *240*.
17 Galw. NE. Knockmao '00, Keekil, Annaghdown—P. Coolaran—Mrs. Joyce!
28 Sligo Ben Bulben '85—Linton *502*.
29 Leitrim Glenade rare '84—B. & V. *112*.

On the western limestones only.

Galium palustre L.

Divisions all. Common.

Galium uliginosum L.

Census 13—East 4, Centre 6, West 3.

2 Kerry N. Near Spa '00: rare and local—Scully.
5 Cork E. †Fota '98—Phillips.
7 Tipp. S. Ardmayle '98—P.
10 Tipp. N. Near Portumna '00—Phillips. Rapla '99—P.
13 Carlow Goresbridge '99, Milford, Carlow—P.
15 Galw. SE. Woodford River '96—Colgan. Portumna '98—P.
17 Galw. NE. Dunmore '00—P.
18 King's Lough Goura '98, Shannon Harbour, Clonmacnoise—P.
19 Kildare Rathangan '98, Curragh, Rathmore—P. Ballitore.
20 Wicklow Blessington '98—P.
23 Westmth. Lough Iron '99—P. Common in centre, rare in west.
24 Longfd. Mouth of Bilberry River '00—P.
25 Roscomn. Lough Ree between Ballybay and Curry Point '85-6—B. & V. *113*.

Probably distributed thinly all over the Central Plain. A plant formerly misunderstood, and old records from 16, 19, 20, 21, 31, 39 cannot be accepted.

Galium Aparine L. Goose-grass; Robin-run-the-hedge.

Divisions all. Common.

Asperula odorata L. Woodruff.

Divisions all *except 27 Mayo West*. No doubt universal, but not a common plant, and rare in many divisions.

Asperula cynanchica L. Squinancywort.

Census 8—East 1, Centre 0, West 7.

1	Kerry S.	Ballinskelligs '92: chiefly in Dingle peninsula—Scully.
2	Kerry N.	Ballybunnion '99: frequent—Scully.
6	Waterfd.	Tramore, S. Madden—*Cyb.* I.
8	Limrck.	Foynes '85-6—Stewart *863*.
9	Clare	Black Head '99—Miss Knowles. North c., SW. r.
15	Galw. SE.	Ardfry '99: very abundant in the west—P.
16	Galw. W.	Barna Head '99—P. East margin v.c.; elsewhere v.r.
17	Galw. NE.	Knockmae '00: coast and L. Corrib common—P.

Chiefly on the limestones and sand-dunes of the west. Miss Ball's Youghal plant is *Galium saxatile*! Confirmation of the Tramore record is desirable.

Sherardia arvensis L. Field Madder.

Divisions all. Common.

Valeriana officinalis L. Wild Valerian.

Divisions all. The aggregate is common.

Valeriana sambucifolia Mik.

Divisions all. Common.

Valeriana Mikanii Syme.

Census 13—East 5, Centre 2, West 6.

1	Kerry S.	Killarney '99: rather frequent—Scully.
2	Kerry N.	Listowel '99: rather frequent—Scully.
3	Cork W.	Millstreet '00—Phillips.
4	Cork Mid	Ballea '00 (Scully): frequent—Phillips.
5	Cork E.	Dodge's glen '00: frequent—Phillips.
7	Tipp. S.	Carrick-on-Suir '00—P.
9	Clare	Cappanawallia mountain '95, Colgan—*Cyb.* 11.
15	Galw. SE.	Lough Cooter '00—P.
18	King's	Lough Goura '98—P.
22	Meath	Oldcastle '96—P.
28	Sligo	Lough Key '97—P.
38	Down	Slieve Muck '89-'90—S. & P. *873*.
39	Antrim	Common on the coast '93—Shoolbred *837*. Mazetown —Stewart *837*.

Undoubtedly rare in the middle parts of Ireland.

***Centranthus ruber** DC. Red Valerian.

Census 9—East 7, Centre 0, West 2.

3	Cork W.	Castletownsend '97, Bandon '96—Phillips.
4	Cork Mid	Carrigrohane '99 : locally abundant—Phillips.
5	Cork E.	Cork, Queenstown, '00 : locally abundant—Phillips.
6	Waterfd.	Carrick, Waterford, '00—Phillips. Passage—Hart *384*.
11	Kilkny.	Thomastown '00—Phillips. Towns frequent.
12	Wexford	Tintern Abbey and New Ross—B. & M. '92 *102*.
21	Dublin	Chapelizod '00 : rare—Colgan.
31	Louth	Dundalk '00—Mrs. Swan. Carlingford abundant—P.
34	Dongl. E.	Buncrana established, J. Hunter—*Fl. Don*.

Occurs frequently as a garden escape. In the above stations it appears to be established beyond the limits of gardens. On old walls except in Cork and Louth, where it has spread to rocks. Abundant about Cork, and perfectly naturalized.

Valerianella olitoria Pollich. Corn-salad (genus); Lamb's Lettuce.

Census 28—East 15, Centre 6, West 7.

1	Kerry S.	Kenmare '00 : rather frequent—Scully.
2	Kerry N.	Ballybunnion '94 : rather rare—Scully.
3	Cork W.	Baltimore '96 : frequent—Phillips.
4	Cork Mid	Ovens '96 : common—Phillips.
5	Cork E.	Midleton '00 : common—Phillips.
6	Waterfd.	Dungarvan and Cappagh '99—P.
7	Tipp. S.	Cahir and SE. of Slievenaman '00—P.
8	Limrck.	Askeaton '97, Bentley—*Hb*. L.F.C.!
9	Clare	Kilfenora '00—Miss Knowles. Inishmore—Hart *365*.
11	Kilkny.	Kilkenny '97—P.
12	Wexford	Carnsore, Wexford, Gorey, '96—Marshall. Frequent.
13	Carlow	Tullow '99 : frequent—P.
14	Queen's	Maryborough '96, north of Graigue '98—P.
16	Galw. W.	Inveran '95—Colgan.
19	Kildare	East of Robertstown '98—P.
20	Wicklow	Delgany and Greystones '94—P.
21	Dublin	Skerries '00 : frequent—Colgan.
22	Meath	Bective '00, Drogheda, Kildalkey, Hill of Down—P.
24	Longfd.	Elfeet Bay on L. Ree '85-6—B. & V. *113*.
25	Roscomn.	Near Athlone '98—P.
31	Louth	Killencoole '96, Boyne—P. Carlingford—Stewart.

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34	Dongl. E.	Inishowen, Ballyshannon, &c.: N. to S.—*Fl. Don.*
35	Dongl. W.	Rosapenna, &c.: north only, frequent—*Fl. Don.*
36	Tyrone	By Lough Neagh '96—Miss Knowles.
37	Armagh	Frequent throughout '92—P.
38	Down	Holywood '00—P. Frequent—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Bellarena '98—Mrs. Leebody. Frequent—*Fl. NE.*

Chiefly on sandy ground near the sea. Inland on dry banks and gravelly ground, and on limestone rocks.

‡**Valerianella Auricula** DC.

Census 17—East 9, Centre 5, West 3.

3	Cork W.	Creagh '00, Baltimore, Kilkerin: rare—Phillips.
4	Cork Mid	Coachford '97: frequent—Phillips.
5	Cork E.	Midleton '00: frequent—Phillips.
6	Waterfd.	Doughtan's (T. Allin)—More '72 *614*.
10	Tipp. N.	Roscrea, Dromineer, '00—Phillips. Cloughjordan—P.
11	Kilkny.	Thomastown and Inistioge '98—P.
12	Wexford	Nook—B. & G. '89 *100*.
13	Carlow	By the Barrow above Borris '99—P.
14	Queen's	Emo '96—P.
15	Galw. SE.	Castle Taylor—More '55 *598*.
16	Galw. W.	Oughterard '35—Babington *51*, *54*.
18	King's	Edenderry '96—P.
21	Dublin	Sutton and Portmarnock '94—P.
22	Meath	Cruicetown '97, Bective '96—P. Navan—*Cyb.* II.
24	Longfd.	Newtowncashel '00—P.
26	Mayo E.	Foxford ['64], More—*Cyb.* I.
31	Louth	Ravensdale '00, Braganstown—P. Castlebellingham—Butler *185*. Clogher Head—Ball *93*.

Rare in the west, and absent from the north.

‡**Valerianella dentata** Pollich.

Census 33—East 15, Centre 11, West 7.

2	Kerry N.	Barrow Harbour '96: rare—Scully.
3	Cork W.	Baltimore '96: frequent—Phillips.
4	Cork Mid	Coachford '96: frequent—Phillips.
5	Cork E.	Castletownroche '00: frequent—Phillips.
6	Waterfd.	Waterford, Carroll—*Cyb.* I.

7	Tipp. S.	Cahir '00, Farranaleen '98—P.
8	Limrck.	Limerick '99—Somerville.
9	Clare	Near Ballyvaughan '79—Corry *240*.
10	Tipp. N.	Dromineer, Roscrea, '00—Phillips. Cloughjordan—P.
11	Kilkny.	Thomastown, Inistioge, Graigue, '98—P. Kilmacow.
12	Wexford	Enniscorthy '98—P. Frequent.
13	Carlow	Goresbridge '99—P. Frequent.
14	Queen's	Graigue '98, Emo—P. Noreville—More *614*.
15	Galw. SE.	Near Ardrahan '00—Mrs. Joyce! F. in SE. and SW.
16	Galw. W.	Kilbeg ferry '99—P. Oughterard—Babington *51*.
17	Galw. NE.	Clonbrock '96—P.
18	King's	Edenderry '96—P.
19	Kildare	Hills N. of Kildare '98—P. Ballitore, Carroll—*Cyb.* I.
20	Wicklow	Greystones, Kilmacanoge, '94—P. Bray—*Cyb.* I.
21	Dublin	Portrane '00: rare—Colgan.
22	Meath	Bective '96—P. Rather frequent.
23	Westmth.	Athlone '98—P. Belvedere Lake, D. Moore—*Cyb.* I.
24	Longfd.	Newtowncashel and Lanesborough '00—P.
25	Roscomn.	Ballinasloe '99, Athlone '98—P.
30	Cavan	Lisnabrin, N. J. Halpin—*Fl. Ulst.* '64.
31	Louth	Bellurgan '00—Mrs. Swan! Braganstown '97—P.
32	Monaghan	Newmills '00—Waddell.
33	Ferman.	Enniskillen '00—Tetley!
35	Dongl. W.	Near Ramelton—*Fl. Don.*
37	Armagh	Lough Ross, Newry, and frequent in north, '92—P.
38	Down	Clay Lake '91—P. Rare—*Fl. NE.*
39	Antrim	Island-magee, Stewart: rare—*Fl. NE.*
40	L'derry	By Lough Foyle, E. Murphy—*Cyb.* I.

Dipsacus sylvestris Huds. Teasel.

Census 17—East 10, Centre 3, West 4.

2	Kerry N.	‡Beal Point '90—Scully.
3	Cork W.	Clonakilty '91, Berehaven '94: rare—Phillips.
4	Cork Mid	Monkstown '00 (Scully): south only, rare—Phillips.
5	Cork E.	Whitegate '00: frequent in the south—Phillips.
6	Waterfd.	Near Mount Congreve common '99—P. F. in E. half.
7	Tipp. S.	Carrick-on-Suir '00—P. Knocklofty '82—Hart *385*.
8	Limrck.	Askeaton '00—P. Common in the north.
9	Clare	Meelick '97—Bentley! Kilrush, Doonbeg—*863*.
10	Tipp. N.	Youghal Bay and Dromineer '99—P.

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11	Kilkny.	Graiguenamanagh '00—Phillips. C. by tidal waters.
12	Wexford	Fisherstown c.—B. & M. '92 *102*. SW. frequent.
17	Galw. NE.	Rosshill '99—P.
20	Wicklow	Arklow Head—Mrs. Wynne '00.
21	Dublin	Corballis, Donabate, '00: rare—Colgan.
22	Meath	Beauparc '00, Bective, Laytown—P.
31	Louth	Boyne Obelisk and Queensborough '96—P.
38	Down	Cranfield Point '89—P. Greencastle—Stewart.

Native in the south, and up the east coast as far as Down, and the west as far as Galway. Inland by the larger rivers and lakes, rare. Appears to be merely casual in Donegal.

Scabiosa Succisa L. Devil's-bit.

Divisions all. Abundant.

Scabiosa arvensis L.

Divisions all, *except 29 Leitrim*. Generally frequent, thinning out towards the west and north-west.

Eupatorium cannabinum L. Hemp-Agrimony.

Divisions all. Frequent.

Solidago Virgaurea L. Golden Rod.

Divisions all, *except 22 Meath, 32 Monaghan*. Local in many divisions.

Bellis perennis L. Daisy.

Divisions all. Abundant.

Aster tripolium L. Sea Starwort.

Maritime and sub-maritime divisions all; namely, 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 15, 16, 17, 20, 21, 22, 27, 28, 29, 31, 34, 35, 36, 37, 38, 39, 40. A plant which ascends the rivers almost to the extreme verge of tidal influence.

Erigeron acre L. Blue Fleabane.

Census 17—East 7, Centre 7, West 3.

7	Tipp. S.	Cahir '00—Phillips.
9	Clare	Ballyvaughan rare '95—Colgan.
10	Tipp. N.	Roscrea '00—Phillips. L. Derg, Miss Jackson—*Cyb.* II.
11	Kilkny.	Thomastown '00—Phillips. Kilkenny—P. South r.

12	Wexford	Killanne—B. & M. '92 *102*. Enniscorthy—*Cyb.* I.
13	Carlow	Bagenalstown '00—Phillips. Local.
14	Queen's	Maryborough '00—P. Frequent.
15	Galw. SE.	Castle Taylor '85—Mrs. Joyce !
16	Galw. W.	Golden Bay on Lough Corrib, Miss Jackson—*Cyb.* II.
18	King's	Clara and Kinnitty '00—P.
19	Kildare	Poulaphuca '00—P. Ballitore, Carroll—*Cyb.* I. Rare.
20	Wicklow	Between Enniskerry and Lough Bray—*Ir. Fl.* '33.
21	Dublin	Skerries '00—P. Local—Colgan.
23	Westmth.	West and north of Moate '99—P.
24	Longfd.	Newtowncashel and Elfeet Bay '00—P.
26	Mayo E.	Near Cong cross, Miss Jackson—*Cyb.* II.
38	Down	Ballykinler '86—P. North of Newcastle—S. & P. *874*.

Sparingly distributed over the middle third of Ireland, thinning out rapidly north and south.

Filago germanica L. Cudweed (genus).

Census 31—East 14, Centre 8, West 9.

1	Kerry S.	Glencar '99 : rather frequent—Scully.
2	Kerry N.	Killarney '99 : rather frequent—Scully.
3	Cork W.	Dunmanway '00 : frequent—Phillips.
4	Cork Mid	Ovens '96 : frequent—Phillips.
5	Cork E.	Aghada '00 : frequent—Phillips.
6	Waterfd.	Opposite Youghal : frequent on coast, '82—Hart *384*.
7	Tipp. S.	Knocklofty '82—Hart *385*.
9	Clare	Inisheer '69—Hart *365*. Ballyvaughan—Foot *324*.
10	Tipp. N.	Ballina '00, R. D. O'Brien—*Hb.* L.F.C. !
11	Kilkny.	Ullard wood near Borris '00—T. Hartley !
12	Wexford	Wexford '96—Marshall. Frequent in the south-east.
13	Carlow	Rathanna '00—T. Hartley ! Tullow '99—P.
14	Queen's	Abbeyleix '98—P.
15	Galw. SE.	Lough Cooter '00—P.
16	Galw. W.	Oughterard '99—P. Local, not rare.
20	Wicklow	Bray Head '99—P.
21	Dublin	Howth '00 : rare—Colgan.
22	Meath	Slieve Bregh '00, Mornington, Oldcastle—P.
24	Longfd.	Newtowncashel '00—P.
26	Mayo E.	Claremorris '00 : frequent—P.
27	Mayo W.	Pontoon '00—P.
30	Cavan	Cavan '96—P.

31	Louth	Ballymascanlan '00—Mrs. Swan! Locally frequent.
32	Monaghn.	Bragan '00—Waddell. Rockcorry '00--P.
34	Dongl. E.	Greencastle, Carrickfad, &c.: in N. and S.—*Fl. Don.*
35	Dongl. W.	Fanet, Magheragh, &c.: local and rare—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Slieve Gullion '92—P. Raughlan—H. W. Lett!
38	Down	Lough Island Reavy '90—P. Frequent—*Fl. NE.*
39	Antrim	Cushendun '86—P. Rare—*Fl. NE.*
40	L'derry	Bellarena '98—Mrs. Leebody. Rare—*Fl. NE.*

A local plant, irregularly distributed. Most of its stations are off the limestone. Rare in the Central Plain.

Filago minima Fr.

Census 18—East 11, Centre 2, West 5.

1	Kerry S.	Kilgarvan '00: rare and local—Scully.
2	Kerry N.	Loo Bridge '99: chiefly in the south, rare—Scully.
3	Cork W.	Dunmanway '00: frequent—Phillips.
4	Cork Mid	Inniscarra '93: rare—Phillips.
5	Cork E.	Fermoy, Chandlee—*Cyb.* II. Great Island—*287*.
7	Tipp. S.	South base of Slievenaman '00—P.
12	Wexford	Rosslare abundant '82—Hart *384*. Local and rare.
13	Carlow	Gowlin '99, St. Mullin's '98—P.
16	Galw. W.	Oughterard '99—P. L. Mask c. '95—M. & S. *545*.
20	Wicklow	Drumgoff '97—Colgan. Widespread but not common.
21	Dublin	Frequent along base of Three Rock Mountain '00--P.
22	Meath	Mayden Tower '00—P.
34	Dongl. E.	Fahan, Bridge End (Hunter)—Hart '99 *405*. Very rare.
36	Tyrone	Omagh and Lough Neagh '96—Miss Knowles.
37	Armagh	By Lough Neagh '92—P.
38	Down	Tyrella '00—P. Common on coast—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Locally c.—*Fl. NE.*
40	L'derry	Bellarena '98—Mrs. Leebody. Locally c.—*Fl. NE.*

Strongly calcifuge, the only station on the limestone area being the sand-dunes at the mouth of the Boyne (22).

Antennaria dioica R. Br. Mountain Cudweed.

Divisions all, *except 4 Cork Mid.* A local plant, irregularly distributed. Rare in 1, 2, 3, 5, 6, 7, 11, 13, 19, 21, 22, 31, 32. 37. Abundant in 15, 16, 17, 18, 25, 27, 35. More or less frequent elsewhere.

Gnaphalium uliginosum L. Cudweed (genus).

Census 37—East 14, Centre 11, West 12.

Divisions all, *except 18 King's Co., 19 Kildare, 23 Westmeath.* Calcifuge, and generally rare in the Central Plain.

Gnaphalium sylvaticum L.

Census 31—East 14, Centre 6, West 11.

1	Kerry S.	Near Kenmare '94 : rare—Scully.
2	Kerry N.	Killarney '96 : chiefly in the south, rare—Scully.
3	Cork W.	Gouganebarra '97 (W. H. Shaw) : rare—Phillips.
4	Cork Mid	Donoughmore—Allin *Fl.* '83. Rare—Phillips.
5	Cork E.	Near Fermoy (Chandlee)—Allin *Fl.* '83. Rare—Phillips.
6	Waterfd.	Near Clonmel—Miss S. Grubb '00.
9	Clare	Glounagalliagh Mountain '96—Colgan.
12	Wexford	Woodbrook (Miss V. Cooper)—B. & M. '92 *102*.
13	Carlow	Myshall (R. C. Browne)—More '72 *614*.
14	Queen's	Mountrath '97—P.
15	Galw. SE.	Chevy Chase '00—P.
16	Galw. W.	Glen Inagh '98—Colgan. Centre and east, frequent.
17	Galw. NE.	Dunmore '00—P.
19	Kildare	Ballitore, Carroll—*Cyb.* I.
20	Wicklow	Kilbride '91—Colgan. Widespread, but not common.
21	Dublin	Near Brittas '95—Colgan.
22	Meath	Slieve Bregh '00—P.
26	Mayo E.	Foxford, Carrowkeribly L., '00—P. Cong—*545*.
27	Mayo W.	Carrickkennedy '99—Colgan. Frequent.
28	Sligo	Ballysadare '00—P. L. Easky and Mass Hill—D'Arcy.
30	Cavan	Slieve Glah and Lough Ramor '96—P.
31	Louth	Carlingford '00—P. Omeath—Hart *381*. Mt. Oriel.
32	Monaghn.	Clontibret '00—Waddell. Mullyash Hill; Falkland.
33	Ferman.	Gubbaroe Point '81-2—Barrington *108*.
34	Dongl. E.	Strass River '98—Hart *405*. Throughout, f.—*Fl. Don.*
35	Dongl. W.	Gweebarra, &c. : throughout, frequent—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles. Frequent.
37	Armagh	South of Newry f. '92—P. Derryadd, Lett!—P. *701*.
38	Down	Hilltown '97—P. Frequent—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry.	Bellarena '92—P. Frequent—*Fl. NE.*

Has an essentially calcifuge distribution, stations on the limestone being extremely rare, if any. Off the limestone it is local, and frequent only in West Connaught and Ulster.

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***Inula Helenium** L. Elecampane.

Census 22—East 8, Centre 4, West 10.

1 Kerry S. *Ballinskelligs '00: rare—Scully.
2 Kerry N. *Ardfert '99: f. in north, rare elsewhere—Scully.
3 Cork W. *Near Goleen '94: frequent in the south—Phillips.
5 Cork E. ‡Near Youghal (Carroll)—Allin *Fl.* '83.
6 Waterfd. Between Lismore and Tallow—Smith 1746 *844*.
7 Tipp. S. Redmondstown and near Clonmel—Miss S. Grubb '00.
9 Clare ‡Cliffs of Moher '00—Miss Knowles. Local in the NW.
12 Wexfd. Ballyconigar, Carroll—*Cyb.* I.
15 Galw. SE. *Garryland '00—P.
16 Galw. W. ‡Inishmacdara '96—P. Rare.
20 Wicklow Whalley Abbey, Ogilby—*Cyb.* I.
26 Mayo E. ‡Near Headford '85—Linton *502*. Milford—*Cyb.* II.
27 Mayo W. ‡Moyne Abbey '00—P. Newport '99—G. P. Farran.
28 Sligo Near Sligo, Miss S. Wynne—*Cyb.* II.
33 Ferman. Devenish Island '00—West.
34 Dongl. E. Malin '98—Hart *405*. *B.shannon, Donegal—*Fl. Don.*
35 Dongl. W. *Fanet, St. John's Point, &c.: N. and S., rare—*Fl. Don.*
36 Tyrone ‡Lough Neagh '96—Miss Knowles.
37 Armagh †West of Goraghwood '92—P. Derryadd—Lett!
38 Down ‡Saul '97, Ballynahinch '88—P.
39 Antrim ‡Carninny '99—Miss Knowles. ‡Frequent—*Fl. NE.*
40 L'derry. †Near Kilrea '94—P. ‡Rare—*Fl. NE.*

A more or less obvious relic of cultivation. Characteristic of the sites of early ecclesiastical settlements, as in 16, 27, 33, 38.

Inula salicina L.

10 Tipp. N. Youghal Bay '99, Portumna '97—P. Curraghmore and Boynas Island '95—Lilly *490*.
15 Galw. SE. Below Woodford '98—P. North half of Lough Derg shores, frequent.

Confined in the British Isles to the limestone shores of Lough Derg, where it is frequent.

Inula crithmoides L. Golden Samphire.

Census 5—East 3, Centre 0, West 2.

1 Kerry S. Near Dingle, D. Moore—*Cyb.* I.
3 Cork W. Castlefreke—Allin *Fl.* '83.

6	Waterfd.	Ballyvoyle Head '99—P. Frequent '82—Hart *384*.
12	Wexford	Hook Head, Baginbun, Saltees, '82—Hart *384*.
21	Dublin	Howth '00—Colgan. Lambay I., Dalkey promontory.

Sea-rocks from Kerry up the east coast to Dublin, locally.

Pulicaria dysenterica Gærtn. Fleabane.

Divisions all. Frequent.

Bidens cernua L. Bur-Marigold (genus).

Census 39—East 14, Centre 13, West 12.

1	Kerry S.	Glencar '99 : rather frequent—Scully.
2	Kerry N.	Rahaneen '92 : rather rare—Scully.
3	Cork W.	Dunmanway '00 : frequent—Phillips.
4	Cork Mid	Ovens '96 : frequent—Phillips.
5	Cork E.	Midleton '94 : frequent—Phillips.
6	Waterfd.	Ballygunner—Miss Horne '99. Clonmel—Miss Grubb.
7	Tipp. S.	Littleton '98—P.
8	Limrck.	Lough Gur abundant '00—P.
9	Clare	Lough Senan '85-6—Stewart *863*.
10	Tipp. N.	Barracurragh '98—P.
11	Kilkny.	Lough Cullin '98—P.
12	Wexford	Boro valley—Moffat '89 *552*. Rare.
13	Carlow	Above and below St. Mullin's '98—P.
14	Queen's	Maryborough '96, Grattan aqueduct—P. Ballybrittas.
15	Galw. SE.	Woodford '00—Phillips. Throughout, not common.
16	Galw. W.	Recess '99—Colgan. ? Very rare.
17	Galw. NE.	Barbersfort '00 : south half frequent—P.
18	King's	Tullamore '99 : frequent—P.
19	Kildare	West of Robertstown '98—P.
21	Dublin	Bog of the Ring '00—Colgan.
22	Meath	Near Navan '96—P. Frequent.
23	Westmth.	Lough Iron '99, Twy Lough, Athlone—P.
24	Longfd.	Longford '98, Ballymahon, Lanesborough—P.
25	Roscomn.	Arigna '00, Drumsna, Lough Gara—P.
26	Mayo E.	Claremorris '00, Ballaghaderreen—P.
27	Mayo W.	Lough Conn '00—P. Frequent.
28	Sligo	Mullaghmore '97—P.
29	Leitrim	Ballinamore '00—Somerville. Common in south half.
30	Cavan	Ballyconnell and Tomkin road '00—Somerville.
31	Louth	Ardee bog and Mansfieldstown—*Ir. Fl.* '33.

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32 Monaghn. Drumreaske '00—W. de V. Kane. Frequent.
33 Ferman. L. Coole, L. Galliagh, '00—West. Crum—*108*.
34 Dongl. E. Stranorlar, &c.: centre and south, rare—*Fl. Don.*
35 Dongl. W. Fanet and near Ardara—*Fl. Don.*
36 Tyrone Lough Neagh '96—Miss Knowles. Leckpatrick—*838*.
37 Armagh Mullaghmore Lough, &c.: frequent, '92—P.
38 Down Downpatrick '99—P. Frequent—*Fl. NE.*
39 Antrim Portglenone '99—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Enagh Lough '97—Mrs. Leebody. Frequent—*Fl. NE.*

Rarer in the south than in the north, and in the east than in the west.

Bidens tripartita L.

Census 34—East 12, Centre 10, West 12.

1 Kerry S. Glencar '99: frequent—Scully.
2 Kerry N. Abbeydorney '99: frequent—Scully.
3 Cork W. Clonakilty '91: frequent—Phillips.
4 Cork Mid Carrigrohane '98: frequent—Phillips.
5 Cork E. Near Buttevant '00: frequent—Phillips.
6 Waterfd. Bunmahon '99—P.
8 Limrck. Lough Gur abundant '00—P.
9 Clare Lisdoonvarna '00—W. de V. Kane. And in south, rare.
10 Tipp. N. Cloughjordan '00—P.
11 Kilkny. L. Cullin '99—P. Castle Blunden—More *614*.
12 Wexford Enniscorthy '98—P. Ferns; Urrin valley.
13 Carlow Ballymartin '00—Miss Wynne!
15 Galw. SE. Woodford '00—Phillips. Chevy Chase '00—P.
16 Galw. W. Glen Inagh '98—Colgan. Rare and local.
17 Galw. NE. Ballyloughaun '99—P.
18 King's Shannon Harbour '98—P.
21 Dublin Bog of the Ring '95—Colgan.
24 Longfd. Near Roosky '00—P.
25 Roscomn. Arigna and Lanesborough '00—P.
26 Mayo E. Cong '95—M. & S. *545*.
27 Mayo W. Mallaranny '99—Marshall. Frequent.
28 Sligo Lough Arrow '97—P.
29 Leitrim Drumahaire '99, and common in the south—P.
30 Cavan Cavan and Lough Ramor '96—P.
31 Louth Collon and Mansfieldstown—*Ir. Fl.* '33.
32 Monaghn. Monaghan '00—W. de V. Kane. Frequent.
33 Ferman. Ballycassidy River '00—Tetley!

14	Queen's	Great Heath of Maryborough abundant '96—P.
16	Galw. W.	Oughterard '99—P. Inveran—Colgan. Renvyle—*902*.
20	Wicklow	Rocky Valley '00—P. Near Lough Bray—*Fl. Hib.*
21	Dublin	*Glenasmole, introduced, '92, Colgan—*Cyb.* II.
23	Westmth.	Near Mullingar—Marshall '99 *541*.
26	Mayo E.	Ballymore L. '00—P. "Narrow Lake"—M. & S. *545*.
27	Mayo W.	L. Conn, L. Cullin, '00—P. Birreencorragh; Delphi.
34	Dongl. E.	Lagawollen '98—Hart *405*. N. & S., r.—*Fl. Don.* *721*.
35	Dongl. W.	Fanet, Killybegs, &c.: N. and S., rare—*Fl. Don.*
37	Armagh	Maghery, Johnson!—P. *701*. *Tartaraghan '92—P.
38	Down	South of Comber '00—P.
39	Antrim	Lough Neagh, D. Moore—*Cyb.* I. †—*Fl. NE.*
40	L'derry	Near Toome, D. Moore: †rare—*Fl. NE.*

Indigenous in the south and west, but not certainly so in the east and north-east. Avoids the limestone.

Chrysanthemum segetum L. Corn Marigold; Gilgowan.

Divisions all. Calcifuge, and in the Central Plain generally confined to those districts where non-calcareous rocks prevail. Abundant almost everywhere except in the Central Plain.

Chrysanthemum Leucanthemum L. Ox-Eye; Dog Daisy.

Divisions all. Common.

Matricaria inodora L. Scentless Feverfew.

Divisions all. Common.

***Matricaria discoidea** DC.

Census 16—East 4, Centre 8, West 4.

10	Tipp. N.	Dromineer '00—Phillips. West side of Nenagh '99—P.
15	Galw. SE.	Ballinasloe '00—Phillips. Athenry '99—P. Railways.
16	Galw. W.	Claddagh '00—Phillips.
17	Galw. NE.	Tuam, roadside, '99—P. Ballinasloe, Athenry, railway.
18	King's	Clara fair-green '99—P.
21	Dublin	Howth '00—P. Three stations in south—Colgan.
22	Meath	Navan station '00—P. E. and S., chiefly on railways.
23	Westmth.	Mullingar c., Athlone, '99, about railways—P.
24	Longfd.	Ballywillan on railway '00—P.
25	Roscomn.	Roscommon '00, Ballinasloe, Carrick, on railways—P.

26 Mayo E.	Foxford roadside '00—P. C. along lines of railway.
27 Mayo W.	Newport, Westport, roads, c. '99—Colgan. Foxford, Ballina, roads, c. '00—P.
30 Cavan	Railway at Drumhawnagh '00—P.
31 Louth	Drogheda, Oldbridge, roadsides, '00—Colgan *222*.
32 Monaghn.	Railway at Monaghan '00—Somerville.
37 Armagh	Railway between Portadown and Lurgan '00, R. Hanna —Stewart *871*.

The above records convey a good idea of the amazing spread of this North American plant over Central Ireland in recent years. First observed in 1894 in Co. Dublin (Colgan *212*). Still almost confined to railways and roadsides near towns.

***Tanacetum vulgare** L. Tansy.

Divisions all, *except 10, 15, 17, 26, 27, 28, 29, 30, 32*. Thoroughly naturalized, but never far from houses, and at best an obvious escape.

‡Artemisia Absinthium L. Wormwood.

Census 18—East 10, Centre 1, West 7.

1 Kerry S.	Castlegregory '00—Scully.
3 Cork W.	Cape Clear and Sherkin Island '96: rare—Phillips.
5 Cork E.	Gyleen '98: rare—Phillips.
6 Waterfd.	Dungarvan '99—P. Frequent.
9 Clare	Inishmore '66—Wright *920*.
11 Kilkny.	Thomastown '98: Nore valley frequent—P.
12 Wexford	Nethertown and Lady's Island '82—Hart *384*. Rare.
13 Carlow	Bagenalstown '99: frequent along the Barrow—P.
14 Queen's	Grantstown '98—P.
15 Galw. SE.	Kilcolgan '99—P. Frequent in the west.
16 Galw. W.	Kilbeg ferry '99—P.
17 Galw. NE.	Oranmore, Ballindooly, Kilbeg, '99—P.
19 Kildare	Near Levitstown '99—P.
20 Wicklow	Wicklow '97: frequent, chiefly on the coast—P.
21 Dublin	Glenasmole '00—Colgan. Lambay I.—Hart *376*.
31 Louth	Whitestown '00, Killencoole '96—P.
35 Dongl. W.	Kindrum, Fanet, Ray—*Fl. Don.*
38 Down	St. John's Point '66, Stewart—*Fl. NE.*

Chiefly in the southern half of Ireland, about villages and houses. Well established, but probably nowhere native.

Artemisia vulgaris L. Mugwort.

Divisions all. Frequent.

Artemisia maritima L.

Census 7—East 3, Centre 1, West 3.

8	Limrck.	Shore above Foynes abundant '85–6—Stewart *863*.
9	Clare	Killydysert, Canon Island, Gleninagh, '79—Corry *240*.
15	Galw. SE.	Parkmore to Kinvarra, c., '99—P. Carranroe—*Cyb.* II.
16	Galw. W.	Barna '00—Mrs. Joyce !
21	Dublin	Portrane '00 : very rare—Colgan.
22	Meath	By Boyne below Mornington '96—P.
31	Louth	Below Dundalk '96—P. Clogher Head, Butler—*Cyb.* II.

The stations of this plant divide themselves into three well-marked groups: (1) the Shannon estuary; (2) Galway Bay; (3) the east coast from Killiney to Dundalk.

Tussilago Farfara L. Coltsfoot.

Divisions all. Common.

***Petasites fragrans** Presl. Winter Heliotrope.

Census 34—East 14, Centre 11, West 9.

Divisions all, *except 2 Kerry N., 16 Galway W., 17 Galway NE., 33 Fermanagh, 37 Armagh, 40 Derry*. An escape from shrubberies, rapidly spreading. Though so widely distributed, it is local or rare in most divisions.

Petasites officinalis Mœnch. Butterbur.

Divisions all. Irregularly distributed. One station only for divisions 15, 16, 36. Frequent, though often local, elsewhere, and apparently *common* only in King's County and Antrim.

Senecio vulgaris L. Groundsel.

Divisions all. Abundant.

Senecio sylvaticus L.

Divisions all, *except 23 Westmeath, 32 Monaghan*. Strongly calcifuge, and in the Central Plain chiefly on dry bog-banks. Not a common species in any of the divisions.

***Senecio squalidus** L.

3	Cork W.	Bandon '00—Phillips.
4	Cork Mid	Cork '00, Crookstown: locally abundant—Phillips.
5	Cork E.	Cork '00, Glounthaune: locally abundant—Phillips.
21	Dublin	Inchicore '00—Phillips *675*.

Thoroughly naturalized in Co. Cork, chiefly about Cork city. A recent importation to Dublin, where it appears to be establishing itself.

Senecio erucifolius L.

19	Kildare	West and north of Leixlip '00—P.
20	Wicklow	Old Court near Bray (Barrington)—More '72 *614*.
21	Dublin	Malahide '00: common—Colgan.
22	Meath	At, and also one mile south of, Laytown '96—P.
31	Louth	Between Drogheda and Dundalk, D. Moore—*Cyb.* 1.

A common plant in Co. Dublin, but extends beyond the county boundary into the adjacent divisions only for a mile or two, excepting the indefinite Louth station, which it would be desirable to confirm.

Senecio Jacobæa L. Ragwort.

Divisions all. Abundant.

Senecio aquaticus L. Marsh Ragwort.

Divisions all. Common.

***Senecio saracenicus** L.

Census 12—East 6, Centre 3, West 3.

Divisions 3, 7, 9, 14, 19, 20, 34, 36, 37, 38, 39, 40. Quite established in many places, and occasionally looking wild, but generally an obvious escape.

Carlina vulgaris L. Carline Thistle.

Census 28—East 12, Centre 10, West 6.

4	Cork Mid	Crosshaven '00 (Scully), Kinsale: rare—Phillips.
5	Cork E.	Midleton '00: rare—Phillips.
6	Waterfd.	Dungarvan, Tramore, '99—P. Stradbally—Hart *384*.
7	Tipp. S.	Near Cahir '00, Ballinure '98—P.

8	Limrck.	Mullagh and Askeaton abundant '00—P.
9	Clare	Black Head '99—Miss Knowles. North c., south v. r.
10	Tipp. N.	Rapla '99 : NW. half frequent—P. Lough Derg c.
11	Kilkny.	Thomastown '98 : local—P.
12	Wexford	Rosslare '96—Marshall. Coast frequent, v. r. inland.
13	Carlow	Leighlinbridge '97 : frequent, local—P.
14	Queen's	Maryborough '96—P. Throughout frequent.
15	Galw. SE.	Loughrea '97 : common—P.
16	Galw. W.	Roundstone '96—P. Abundant along east margin.
17	Galw. NE.	Knockmae '00 : common—P.
18	King's	Clara '99 : throughout, very frequent—P.
19	Kildare	Robertstown '98—P. Rather frequent.
20	Wicklow	Glenmalure '97—Colgan. Coast f., inland v. r.
21	Dublin	Greenhills '00 : frequent—Colgan.
22	Meath	Lough Sheelin '96—P.
23	Westmth.	Knock Eyon '99, and common in the west—P.
24	Longfd.	Newtowncashel '00 : common on Lough Ree—P.
25	Roscomn.	Mote Park '97 : common in the south—P.
26	Mayo E.	Callow '00—P. Common in the south.
27	Mayo W.	Lough Conn '00—P. West of Castlebar '99—Marshall.
30	Cavan	Mount Nugent '96—P.
35	Dongl. W.	St. John's Point—*Fl. Don.*
38	Down	Ballykinler '00—Waddell. Rathmullen '00—P.
39	Antrim	Ballycastle, Miss Hincks—*Fl. Ulst.* '64.

Strongly calcicole. A characteristic Central Plain species, extending sparingly into the extreme north and south along the coast sand-hills. Occasionally absent from or rare on the limestone, as in Meath and the north-west, or found far from it, as in Wicklow. A line drawn from Killala to Drogheda marks the limit of its continuous range.

Arctium majus Bernh. Burdock (genus).

Census 6—East 4, Centre 2, West 0.

21	Dublin	St. Doolagh's '96—P.
22	Meath	Near Oldcastle '96—P.
25	Roscomn.	Ballinasloe '99—P.
30	Cavan	South end of Lough Ramor '96—P.
31	Louth	Blackrock '96—P.
37	Armagh	Near Loughgall '92—P.

Possibly frequent; Irish Burdocks have not been investigated except in one or two localities.

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Arctium nemorosum Lej.

Census 7—East 5, Centre 1, West 1.

21	Dublin	The Burrow at Howth '95—P.
28	Sligo	Sligo '97—P.
33	Ferman.	Knockmore '81—Stewart *854*.
37	Armagh	Navan Fort '92—P. Tynan '89—B.N.F.C. *117*.
38	Down	Newcastle ['90]—S. & P. *873*. ? Frequent—*Fl. NE.*
39	Antrim	Fair Head '93—Shoolbred *837*. ? Frequent—*Fl. NE.*
40	L'derry	Benevenagh, Stewart—*Fl. NE.*

Probably frequent in the north-east; undoubtedly rare over the greater portion of Ireland.

Arctium minus Bernh.

Census 29—East 10, Centre 8, West 11.

1	Kerry S.	Waterville '92: frequent—Scully.
2	Kerry N.	Listowel '94: frequent—Scully.
3	Cork W.	Dunmanway '00: common—Phillips.
4	Cork Mid	Coachford '97: common—Phillips.
5	Cork E.	Youghal '00: common—Phillips.
8	Limrck.	Adare '99—Somerville. Limerick '00—P.
9	Clare	Ballyvaughan '95—Colgan. Clare Castle, Ballycar—*863*.
10	Tipp. N.	Dromineer '96—Colgan. Ballingarry (*paniculatus*)—P.
12	Wexford	Wexford '96—Marshall. Courtown '94—P.
13	Carlow	Borris '99, Leighlinbridge '98—P.
14	Queen's	Maryborough (*paniculatus*) '96—P.
15	Galw. SE.	Portumna '96—Colgan. Ardfry (*paniculatus*) '99—P.
16	Galw. W.	Glen Inagh '98—Colgan. Maam, Clonbur—M. & S. *545*.
19	Kildare	Carbury '96—P.
20	Wicklow	Newcastle '94—P.
21	Dublin	Loughshinny '00: frequent—Colgan.
23	Westmth.	Moate '99—P.
24	Longfd.	Killashee '00—P.
25	Roscomn.	Ballinasloe '99—P.
26	Mayo E.	Claremorris '00—P. Clonbur '96—Marshall.
27	Mayo W.	Mallaranny district frequent '99—Marshall.
28	Sligo	Ballysadare '96—Colgan.
29	Leitrim	Lough Gill '99—P. Lough Allen '84—Stewart *859*.
31	Louth	Baltray and Castlebellingham (*paniculatus*) '96—P.
33	Ferman.	Enniskillen '00—Tetley!

34	Dongl. E.	Clonmany '98—Hart *405*.
35	Dongl. W.	Fanet—Hart '00.
38	Down	Benderg, Moygannon—S. & P. *874*. Marino '85—P.
39	Antrim	Crumlin and Larne (*majuscula*), Stewart—S. & P. *874*.

Probably common over the greater portion of Ireland, but undoubtedly rare in the north.

Arctium intermedium Lange.

Census 28—East 10, Centre 7, West 11.

1	Kerry S.	Waterville '92: frequent—Scully.
2	Kerry N.	Listowel '94: probably frequent—Scully.
3	Cork W.	Near Macroom (*nemorosum* Bab.) '97—Phillips.
4	Cork Mid	Coachford '97: frequent—Phillips.
5	Cork E.	Whitegate '98: frequent—Phillips.
8	Limrck.	Doon '00—P.
9	Clare	On the three Isles of Aran '69—Hart *365*.
10	Tipp. N.	Toomavara and Ballingarry '00—P.
13	Carlow	Borris '98—P.
14	Queen's	Timahoe '97, Maryborough '96—P.
15	Galw. SE.	Clarinbridge and Ardfry House '99—P.
16	Galw. W.	Inishbofin '75—More *616*.
17	Galw. NE.	Near Galway '99—P.
20	Wicklow	Wicklow '97, Enniskerry '94—P.
21	Dublin	Malahide '94, Baldoyle—Colgan. Howth—P.
22	Meath	Laytown and Mornington '96—P.
24	Longfd.	Killashee and Ballymahon '00—P.
25	Roscomn.	Slieve Bane '00, Arigna, Ballinasloe—P.
26	Mayo E.	Claremorris, Callow Lough, '00—P. Foxford—*Cyb.* I.
27	Mayo W.	South of Derreen '00—P.
28	Sligo	Sligo '97—P.
29	Leitrim	Drumshanbo frequent '84—Stewart *859*.
31	Louth	Togher and Clogher '96—P.
35	Dongl. W.	Tory Island '77—Barrington *106*.
36	Tyrone	Washing Bay on Lough Neagh '96—Miss Knowles.
38	Down	Copeland Island '98—Moffat *558*. ?Frequent—*Fl. NE.*
39	Antrim	Ballygalley, Stewart: ?frequent—*Fl. NE.* and *874*.
40	L'derry	Toome bridge '98—Druce *285*. Magilligan '94—P.

Apparently frequent throughout the country.

institute

Carduus pycnocephalus Jacq.

Census 31+(1)—East 14, Centre 8, West 9+(1).

1	Kerry S.	‡Ballinskelligs '00—Scully.
2	Kerry N.	Ballybunnion '94—Scully.
3	Cork W.	Baltimore '96 : common on the coast—Phillips.
4	Cork Mid	Crosshaven '00 : common near the coast—Phillips.
5	Cork E.	Youghal '00 : common near the coast—Phillips.
6	Waterfd.	Bunmahon '99—P. Frequent on the coast.
7	Tipp. S.	Clonmel '82—Hart *385*.
8	Limrck.	About Limerick '00—P.
9	Clare	Ballyvaughan '00—Miss Knowles. Inishmore—P.
11	Kilkny.	Kilkenny '00—Phillips. Nore valley frequent—P.
12	Wexford	Wexford '96—Marshall. Coast frequent.
13	Carlow	Leighlinbridge '98—P. Ballintemple; Garryhundon.
14	Queen's	Maryborough '96—P.
15	Galw. SE.	North of Gort '00—P. And in the west, rare.
16	Galw. W.	Frequent in Galway neighbourhood '99—P.
17	Galw. NE.	Clonbrock '96, Oranmore '99—P.
18	King's	Clara '99 : frequent throughout—P.
19	Kildare	Robertstown '98 : throughout frequent—P.
20	Wicklow	Newcastle '00—C. Waterfall. Coast frequent.
21	Dublin	Skerries '00 : frequent—Colgan.
22	Meath	Navan '00 : centre, east, and south, v.f.—P.
23	Westmth.	Knock Eyon '99—P. Centre v.f., west v.r.
24	Longfd.	Castlerea and Newtowncashel '00—P.
25	Roscomn.	Athlone f., Lanesborough, '00—P. Yew Point—*113*.
26	Mayo E.	†Ballaghaderreen '99—P.
(27	Mayo W.	*Mallaranny by railway '99—Marshall.)
28	Sligo	Strandhill '97—P.
31	Louth	Ardee '97, and common on coast—P.
34	Dongl. E.	Greencastle, &c. : Lough Foyle only—*Fl. Don.*
38	Down	Ardmillan '98—P. Coast frequent—*Fl. NE.*
39	Antrim	Head of Glenariff '85, P. : coast frequent—*Fl. NE.*
40	L'derry	Bellarena '98—P. Coast frequent—*Fl. NE.*

Generally abundant round the coast, though rare in the NW. Inland on esker-ridges, dry banks, and waste ground, frequent and often abundant except in the north, and I do not doubt usually native.

Carduus nutans L. Musk Thistle.

Census 5—East 1, Centre 0, West 4.

5	Cork E.	Little Island '00, Power Head '98—Phillips.
9	Clare	Inishmore '96—O'Kelly! Aran and Burren, local, r.
12	Wexford	‡Caim '90, Aughnaclappa—B. & M. *MS.* Tinnyberna.
15	Galw. SE.	Oranmore, '85—Mrs. Joyce! C. Taylor; Kiltartan.
26	Mayo W.	Clare Island, Hon. Emily Lawless—*Cyb.* II.

The West Cork, Kildare, and Antrim records appear to be referable to casuals or errors.

Carduus crispus L. Welted Thistle.

Census 19—East 9, Centre 7, West 3.

8	Limrck.	Limerick '00—P.
9	Clare	Corofin '92, Levinge—*Cyb.* II.
11	Kilkny.	Kilkenny '00—Phillips.
14	Queen's	Stradbally '98: not rare—P.
15	Galw. SE.	Castle Taylor—More '55 *598.*
18	King's	Edenderry '96—P.
19	Kildare	Robertstown '98: frequent in north and centre—P.
21	Dublin	†Near Mulhuddart '00: rare—Colgan.
22	Meath	Navan '00: throughout, frequent—P.
23	Westmth.	By canal near Kenny '99—P. And in the west, v.r.
24	Longfd.	Newtowncashel and Ballymahon '00—P.
30	Cavan	Mount Nugent '96—P.
31	Louth	Dunleer '99: frequent—P.
32	Monaghn.	Rockcorry '00—P. Clones—Stewart. Cremorne.
34	Dongl. E.	Lag '98—Hart *405.* Rare: N. and S. only—*Fl. Don.*
37	Armagh	Armagh '94—W. F. Johnson! North only, local—P.
38	Down	St. John's church '96—P. *759.* Very rare—*Fl. NE.*
39	Antrim	Larne '95—P. Very rare—*Fl. NE.*
40	L'derry	Magilligan '95—P.

Chiefly about villages and waste ground in the east, and possibly introduced in many of its stations.

Cnicus lanceolatus Willd. Spear Thistle.

Divisions all. Common.

Cnicus palustris Willd.

Divisions all. Common.

stitute

Cnicus pratensis Willd.

Divisions all, but not seen recently in Dublin or Wicklow. A local plant. Rare in 13 Carlow, 22 Meath, 31 Louth, 37 Armagh, 38 Down, 40 Derry. Abundant in 16 Galway West, 27 Mayo West, 33 Fermanagh, 34–35 Donegal. In the other divisions it may be classed as frequent, or as locally abundant.

Cnicus arvensis Hoffm. Creeping Thistle.

Divisions all. Common.

***Silybum Marianum** Gærtn. Milk Thistle.

Census 23—East 13, Centre 5, West 5.

1	Kerry S.	Castlegregory '94: very rare and local—Scully.
2	Kerry N.	Rahaneen '92: rather rare and local—Scully.
3	Cork W.	Glandore (Miss Hungerford)—Allin *Fl.* '83. Rare.
4	Cork Mid	Carrigaline (Scully): rare—Phillips.
5	Cork E.	Mallow (Chandlee)—Allin *Fl.* '83. Rare—Phillips.
6	Waterfd.	Waterford, Carroll—*Cyb.* I.
7	Tipp. S.	Near Tipperary, Scully—*Cyb.* II.
8	Limrck.	Askeaton! '00—R. D. O'Brien.
9	Clare	Muckinish '95—Colgan. Inishmore (Hart)—*614*.
10	Tipp. N.	Dromineer '96, Colgan—*Cyb.* II.
11	Kilkny.	Lacken Hill, S. Madden—*Cyb.* I.
12	Wexford	Chapel railway station—B. & M. '92 *102*.
14	Queen's	Rock of Dunamase, T. Chandlee—*Cyb.* I.
16	Galw. W.	Beach near Galway, Melville—*Cyb.* I.
19	Kildare	Near Ballitore, J. Morrison—*Cyb.* I.
20	Wicklow	Coast near Wicklow—*Guide* '78.
21	Dublin	Near Donabate '00: rare—Colgan.
31	Louth	Roadside near Castlebellingham '90—Butler *185*.
36	Tyrone	By Lough Neagh '96—Miss Knowles.
37	Armagh	Maghery '80 (W. F. Johnson!): very rare—P. *701*.
38	Down	Crawfordsburn '85—P. Near Newtownards—*Fl. Ulst.*
39	Antrim	Whitepark Bay '95—P. Frequent—*Fl. NE.*
40	L'derry	Magilligan '95—P. Very rare.

A plant of uncertain appearance, long established in sandy or waste ground in some of its stations, but always an escape from cultivation, and hardly deserving a place in the flora.

Saussurea alpina DC.

Census 9—East 2, Centre 1, West 6.

1	Kerry S.	Glanbehy '92—Scully. Brandon, Glencar—*Cyb.* II.
2	Kerry N.	Mangerton '94: very rare and local—Scully.
7	Tipp. S.	Galtymore '80—Hart *372*.
16	Galw. W.	Muckanaght '98—Colgan. Ben Lettery '82—Hart *380*.
20	Wicklow	Cliffs over Lough Ouler '84—Colgan *199*.
27	Mayo W.	Sheffry '99—Colgan *221*. Croaghpatrick—Hart *380*.
34	Dongl. E.	Bulbein Mount—*Fl. Don.*
35	Dongl. W.	Dunlewy '84, Colgan—*Cyb.* II. Rare—*Fl. Don.*
38	Down	Slieve Muck North '93—P.

Centaurea nigra L. Black Knapweed.

Divisions all. Abundant.

Centaurea Scabiosa L. Great Knapweed.

Census 21—East 11, Centre 6, West 4.

4	Cork Mid	Near Kinsale '91—Phillips. Dunderrow—Allin *Fl.*
5	Cork E.	Midleton '00: frequent—Phillips.
6	Waterfd.	Dungarvan '99—P. Frequent near the coast.
7	Tipp. S.	Fethard '00—Phillips. Clonmel—Miss S. Grubb.
8	Limrck.	Rathkeale '98, O'Brien—*Hb.* L.F.C.! F. in north.
9	Clare	Ennis '95—M. & S. *545*. Burren and Aran common.
11	Kilkny.	Kilkenny '00—Phillips. Locally abundant.
12	Wexford	New Ross frequent—B. & G. '89 *100*. SW. only, f.
13	Carlow	Leighlinbridge '97: abundant in west and south—P.
14	Queen's	Rathdowney '00—Phillips. SE. half frequent.
15	Galw. SE.	Loughrea '00—Phillips. Abundant in west—P.
16	Galw. W.	Glen Inagh '98—Colgan. Rare in W., c. on E. margin.
17	Galw. NE.	Tuam '99: common except in the east—P.
19	Kildare	Kildare '97, Kilcock—P. Ballitore, &c.—*Cyb.* I.
20	Wicklow	Greystones to Kilcoole '00—P. NE. corner only.
21	Dublin	Greenhills '00: local—Colgan.
22	Meath	Kilmessan '00: local—P.
23	Westmth.	Between Moate and Athlone '00—P.
25	Roscomn.	Near Ballinasloe '99—P.
26	Mayo E.	Ballyhaunis '00—P. Common in SW.
31	Louth	Ardee '97—P.

Chiefly in the southern half of the Central Plain. Rare except on limestone.

***Centaurea Cyanus** L. Corn Bluebottle.

Census 21—East 9, Centre 5, West 7.

1 Kerry S. Glencar '90: rare—Scully.
2 Kerry N. Farranfore '92: rare—Scully.
3 Cork W. Occurs occasionally—Allin *Fl.* '83.
4 Cork Mid Occurs occasionally—Allin *Fl.* '83.
5 Cork E. Near Midleton '90 (J. Griffin): rare—Phillips.
6 Waterfd. Near Clonmel—Miss S. Grubb '00.
9 Clare Gleninagh '95—P.
10 Tipp. N. Dromineer '00—Phillips.
12 Wexford Ballyhyland—Moffat '89 *552*. Rosslare—B. & M. *MS.*
23 Westmth. Knock Drin—Levinge '94 *484*.
29 Leitrim Glenade '84—B. & V. *112*.
31 Louth Greenore '00—P.
32 Monaghn. Rockcorry '00—P.
33 Ferman. Rossclare on Lower Lough Erne '81-2—Barrington *108*.
34 Dongl. E. Throughout, frequent—*Fl. Don.*
35 Dongl. W. Throughout, frequent—*Fl. Don.*
36 Tyrone Newtownstewart '96—Miss Knowles. NW. rare—*838*.
37 Armagh Frequent throughout '92—P.
38 Down Holywood '00—P. Frequent—*Fl. NE.*
39 Antrim Cullybackey '99—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Frequent—*Fl. NE.*

Perhaps little more than casual in its southern stations. In NE. and NW. Ulster it is frequent and established.

***Cichorium Intybus** L. Chicory.

Census 24—East 14, Centre 3, West 7.

3 Cork W. ‡Skibbereen '97: frequent in south—Phillips.
4 Cork Mid. ‡Carrigrohane, &c.—Power *Fl.* '45. Rare—Phillips.
5 Cork E. †Youghal '00: frequent—Phillips.
6 Waterfd. Tramore '97—Mrs. Persse. Ardmore Head; Clonmel.
8 Limrck. Longpavement, '00—R. D. O'Brien. *North, rare.
9 Clare *Ballyvaughan '00—R. D. O'Brien. Inishmore '95—P.
11 Kilkny. Thomastown '00—Phillips. Kilkenny; Ballyonskill.
12 Wexford ‡Kilmanock '89—B. & G. *101*. Very frequent in SW.
13 Carlow *Carlow '98—P.
15 Galw. SE. *Carrowmore '99, Garryland, Kinvarra—P.
16 Galw. W. ‡Moycullen '99—P.

18	King's	Birr '00—W. de V. Kane.
19	Kildare	Co. Kildare, F. Haughton—*Cyb.* I.
20	Wicklow	Murrough, D. Moore—*Cyb.* I. Fassaroe—More *614*.
21	Dublin	*Portrane '00: rare—Colgan.
22	Meath	*Lough Sheelin '96, Gormanstown '95—P.
26	Mayo E.	Ballinrobe '91—Mrs. Persse! Mount Falcon; Cong.
27	Mayo W.	Cloghans '99—Miss A. C. Lewin *487*. Rare.
31	Louth	Dundalk '99—Mrs. Swan. Frequent in SE.—P.
34	Dongl. E.	Greencastle '96—Mrs. Leebody. *Inch—*Fl. Don.*
35	Dongl. W.	*Near Ramelton, Dean Gwynn—*Fl. Don.*
38	Down	Killough '98—B.N.F.C. *136*. Very rare—*Fl. NE.*
39	Antrim	Cullybackey '99—Miss Knowles. V. r.—*Fl. NE.*
40	L'derry	Salter's Castle—*Fl. Ulst.* Very rare—*Fl. NE.*

A mere casual in most of its Irish stations. In sandy fields in SE. Louth it is abundant and appears naturalized, and the same remark probably applies to SW. Wexford: elsewhere it would seem to be a waif of cultivation.

Lapsana communis L. Nipplewort.

Divisions all. Common.

†Picris echioides L. Bristly Ox-tongue.

Census 7—East 6, Centre 0, West 1.

4	Cork Mid	Ballincollig, J. Sullivan—*Cyb.* II.
5	Cork E.	†Rostellan and Gyleen '98: rare—Phillips.
6	Waterfd.	Near Dungarvan '82—Hart *384*. Passage—*Cyb.* II.
12	Wexford	Wexford harbour '96—Marshall *537*. South, local.
21	Dublin	Donabate '00: very rare—Colgan.
22	Meath	Laytown on rough banks '96—P.
39	Antrim	Black Head '90—P. Island-magee, Stewart—*Fl. NE.*

‡Picris hieracioides L.

7	Tipp. S.	Vale of Aherlow, c. in old gravel-pit, '00—P.
13	Carlow	Railway banks N. of Athy abundant '99—P.
14	Queen's	Railway banks E. of Portarlington abundant '99—P.

Thoroughly established and abundant in these stations, but the absence of previous records would seem to indicate that it is a modern immigrant. Old stations in Cork and Dublin refer to casuals or errors.

†Crepis taraxacifolia Thuill. Hawk's-beard (genus).

Census 18—East 6, Centre 9, West 3.

6	Waterfd.	Clonmel '97—P. Blenheim rare—B. & G. *100.*
7	Tipp. S.	Cahir '00, Fethard '97—P. Clonmel '00—Phillips.
8	Limrck.	Mungret '00, O'Brien—*Hb.* L.F.C.!
9	Clare	Ballyvaughan '96, O'Kelly—*Cyb.* II.
10	Tipp. N.	Thurles '98—P.
11	Kilkny.	Kilkenny '97—P.
13	Carlow	Bagenalstown '97—P.
14	Queen's	Mountrath '97, Maryboro'—P. Mountmellick—*Cyb.* II.
15	Galw. SE.	Ballinasloe '98—P.
16	Galw. W.	Ashford bridge '95, Miss Jackson—*Cyb.* II.
19	Kildare	Naas '99, Curragh, Leixlip—P.
20	Wicklow	Greystones '00, Delgany, Bray—P.
21	Dublin	Portmarnock '00: common—Colgan.
23	Westmth.	Athlone district common '98–9—P.
24	Longfd.	Saint's Island on Lough Ree '99—Miss R. Smith!
25	Roscomn.	Kiltoom '97, and common about Athlone—P.
26	Mayo E.	Lisloughry '95, Miss Jackson—*Cyb.* II.
33	Ferman.	Belleek '00—P.

Chiefly near towns in the Limestone Plain. More common about Athlone and Dublin than elsewhere. Appears to be spreading rapidly.

Crepis virens L.

Divisions all. Abundant.

***Crepis biennis** L.

Census 13+(1)—East 7, Centre 6, West (1).

4	Cork Mid	Carrigaline (Scully) and Cork, '00—Phillips.
5	Cork E.	Near Cork '00—Phillips. Fermoy, Currey—*Cyb.* II.
6	Waterfd.	Near Cappoquin '80, F. E. Currey—*Cyb.* II.
8	Limrck.	Near Tarbert, Scully—*Cyb.* II.
10	Tipp. N.	Dromineer and Youghal Bay abundant '99—P.
18	King's	Geashill '96—P.
20	Wicklow	Rathdrum '95, W. Guinness; Bray '91, More—*Cyb.* II.
24	Longfd.	Newtownforbes '99, near Longford '98—P.
(28	Sligo	Lough Gill, casual, '99—P.)
32	Monaghn.	Monaghan, Castleshane, Mullaghmore L. '00—Waddell.
36	Tyrone	Omagh '96—Miss Knowles.

37	Armagh	Armagh '92—P.
38	Down	Marino '00, Crossgar '99—P.
39	Antrim	Ballymena spreading '99—Miss Knowles. Now common in S. half—P.

Naturalized and spreading, so far chiefly in Antrim, Down, Monaghan, and Tipperary N.

Crepis paludosa Mœnch.

Census 37—East 15, Centre 12, West 10.

2	Kerry N.	Listowel '90—Scully.
3	Cork W.	Millstreet (Carroll)—Allin *Fl.* '83.
4	Cork Mid	Near Healy's Bridge '95: rare—Phillips.
5	Cork E.	Midleton—Allin *Fl.* '83. Glenbower Wood—Power *Fl.*
6	Waterfd.	Dunmore, Lismore, '99—P. Comeraghs f.—Hart *384*.
7	Tipp. S.	Muskry L. '00—P. Frequent in the south.
8	Limrck.	Doon '00—P. Limerick—Somerville. Glenstal—*300*.
9	Clare	Glounagalliagh mountain '96, Colgan—*Cyb.* II.
10	Tipp. N.	Silvermines '99: frequent in SE.—P.
11	Kilkny.	Inistioge '00—Phillips. Borris '84—Hart *383*.
12	Wexford	Macmine '97—Marshall *539*.
13	Carlow	Ballintemple '99: throughout, rare—P.
14	Queen's	Cullenagh '97; widespread, rare—P.
15	Galw. SE.	Dalystown '98: south-centre, common—P.
16	Galw. W.	Glen Inagh '99—Colgan *221*. Frequent.
18	King's	Clonad wood '96, Slieve Bloom f.—P. Portarlington.
19	Kildare	Nurney '97—P. Frequent.
20	Wicklow	Lugnaquilla '97—Colgan. Frequent—P.
21	Dublin	Ticknock '00—Colgan. Extreme south only, frequent.
22	Meath	Navan '00, Beauparc, Bective—P.
23	Westmth.	Loughanstown and L. Deravaragh—Levinge '94 *484*.
25	Roscomn.	Corkip Lough '99, Lough Key '97—P.
26	Mayo E.	Claremorris '00—P. Common.
27	Mayo W.	Mallaranny '99—Marshall. Very frequent.
28	Sligo	Ballysadare '00—P. Frequent throughout.
29	Leitrim	Lurganboy '99: common in the north—P.
30	Cavan	Lough Oughter '96—P. Locally common.
31	Louth	Kerney's Cross '97—P. Carlingford; Mt. Oriel.
32	Monaghn.	Drumreaske '00—Waddell. Frequent.
33	Ferman.	Florencecourt '00—P. Common in SW.
34	Dongl. E.	Finn valley, &c.: common—*Fl. Don.*

35 Dongl. W. Poisoned glen, &c.: common—*Fl. Don.*
36 Tyrone Omagh '96: frequent—Miss Knowles.
37 Armagh Centre and south, rare, '92—P.
38 Down Hilltown '97—P. Frequent—*Fl. NE.*
39 Antrim Ticloy '99—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Eglinton '98—Mrs. Leebody. Frequent.

A widespread plant, commoner in the north than in the south. More abundant off than on the limestone, but this is chiefly due to its preference for the skirts of the mountains.

Hieracium Pilosella L. Mouse-ear Hawkweed.

Divisions all. Common.

Hieracium senescens Backh.

38 Down By the river in Tollymore Park '00—Waddell.

An interesting discovery, being the first time that one of the *alpina* group of Hawkweeds has been found in Ireland.

Hieracium anglicum Fr.

Census 19—East 6, Centre 3, West 10.

1 Kerry S. Near Kenmare '00: local—Scully.
2 Kerry N. Killarney '99: very local—Scully.
3 Cork W. Millstreet mountains '00: rare—Phillips.
6 Waterfd. Comeraghs ['82–3]—Hart *390*.
7 Tipp. S. Above Lough Curra in Galtees '80—Hart *372*.
9 Clare Burren '92, O'Kelly—*Cyb.* II. Inishmore '93—*203*.
16 Galw. W. Lisoughter '95—Carr! Salruck, Muckanaght—*380*.
20 Wicklow South slope of Lugnaquilla '81—Hart *371*.
27 Mayo W. Nephin: frequent on the mountains, '82—Hart *380*.
28 Sligo Keishcorran '97—P. Ben Bulben range frequent.
29 Leitrim Lough Gill '99—P. Ben Bulben range frequent.
30 Cavan Tent's mountain, &c. '81—Stewart *854*.
31 Louth Carlingford mountain '00—P.
33 Ferman. Knockmore and elsewhere in SW. '81—Stewart *854*.
34 Dongl. E. Slieve Snacht '98—Hart *405*. N. only, r.—*Fl. Don.*
35 Dongl. W. Muckish, &c.: throughout, frequent—*Fl. Don.*
38 Down Common on the Mournes '89–'90—S. & P. *873*.
39 Antrim Fair Head '97—P. Common—*Fl. NE.*
40 L'derry Benevenagh '93—Shoolbred *837*. Frequent.

Occurs on most of the mountain-groups.

Hieracium cerinthiforme Backh.

35 Dongl. W. River Eglish '91, Hanbury—*Fl. Don.* Slieve League (var. *Hartii*) '91 (Hart)—Hanbury *360*.

Hieracium iricum Fr.

Census 15—East 3, Centre 0, West 12.

1 Kerry S. Summit of Kenmare-Glengariff road '98—P.
2 Kerry N. Killarney '99: very local—Scully.
3 Cork W. Millstreet mtns. '00—Phillips. Sugarloaf—Allin *Fl.*
9 Clare Ballyvaughan '92, Levinge—*Cyb.* II. North f.
15 Galw. SE. S. of Kinvarra, Garryland, '00—P. C. Taylor—*600*.
16 Galw. W. Benwee '99—Colgan *221*. Frequent.
17 Galw. NE. Esker 4 miles N. of Tuam abundant '99—P.
27 Mayo W. Rosserk, L. Conn, '00—P. Doo L.—Hart *380*.
28 Sligo Knockacree '96—Colgan. Ben Bulben—Corry *248*.
29 Leitrim Glenade and L. Gill '99—P. Faughrey '96—Colgan.
31 Louth Carlingford mountain '93—P.
34 Dongl. E. Finn River, &c.: centre and south, rare—*Fl. Don.*
35 Dongl. W. Gweebarra, &c.: throughout, rare—*Fl. Don.*
39 Antrim Garron Tower '00—Mrs. Leebody. Frequent.
40 L'derry Downhill '95—P. Very plentiful [on Benevenagh] '93—Shoolbred.

Chiefly in the west.

Hieracium flocculosum Backh.

38 Down Spinkwee River ['90]—S. & P. *873*.
39 Antrim Sallagh Braes '86—Stewart *865*.

Hieracium Leyi F. J. Hanb.

40 L'derry Benevenagh '93—Shoolbred *837*.

Hieracium Schmidtii Tausch.

Census 8—East 2, Centre 0, West 6.

2 Kerry N. Ross Island '85—Linton *502*. Killarney—Backhouse *82*.
3 Cork W. Near Bantry '78 (Carroll), near Millstreet—Allin *Fl.*
28 Sligo Goat Island in Lough Gill '84—B. & V. *112*.
29 Leitrim Arroo Mountain '84—B. & V. *112*.
34 Dongl. E. Effishmore '98—Hart *405*. North only, rare—*Fl. Don.*
35 Dongl. W. Glenties and Slieve League '91—*Fl. Don.*
38 Down Bencrom ['90]—S. & P. *873*.
39 Antrim Ballintoy '95—Brenan *168*.

stitute

Hieracium lasiophyllum Koch.

Census 7—East 3, Centre 1, West 3.

16 Galw. W. By Lough Corrib near Bleanoran '99—P.
17 Galw. NE. Menlo '99—P.
33 Ferman. Knockmore, Carrick, Badmore, '81—Stewart *854*.
35 Dongl. W. Bluestack Mountains '91—*Fl. Don.*
38 Down Ballykinler sand-dunes '86—P. Rostrevor—*Fl. NE.*
39 Antrim Sallagh Braes, Stewart : very rare—*Fl. NE.*
40 L'derry Benbradagh '69, Stewart—*Fl. NE.*

Hieracium Farrense F. J. Hanb.

39 Antrim Sallagh Braes '90—Stewart.

Hieracium proximum F. J. Hanb.

19 Kildare By the Liffey at Poulaphuca and Ballymore '00—P.
20 Wicklow By the Liffey at Poulaphuca '00—P.
34 Dongl. E. River Finn above Stranorlar '93—*Fl. Don.*

Hieracium rubicundum F. J. Hanb.

34 Dongl. E. Mintiaghs—*Fl. Don.*
35 Dongl. W. Glenties and Lennan River—*Fl. Don.*
39 Antrim Sallagh Braes '90—Stewart.

Hieracium argenteum Fr.

16 Galw. W. Muckanaght and Maumeen ['82]—Hart *390*.
34 Dongl. E. Mintiaghs and near Stranorlar—*Fl. Don.*
35 Dongl. W. Poisoned Glen—*Fl. Don.*
38 Down Slieve Donard, &c. in Mourne M. '89-90—S. & P. *873*.

Hieracium Sommerfeltii Lindeb.

35 Dongl. W. Knockalla—*Fl. Don.*
40 L'derry Benevenagh (Stewart)—S. & P. *874*.

Hieracium scoticum F. J. Hanb.

35 Dongl. W. Glenties '93, Carrick River '92—*Fl. Don.*

Hieracium saxifragum Fr. var. *orimeles* F. J. Hanb.

34 Dongl. E. Mintiaghs '91—*Fl. Don.*
35 Dongl. W. Near Glenties—*Fl. Don.*

Hieracium hibernicum F. J. Hanb.

34 Dongl. E. Moynalt near Laghy—*Fl. Don.*
38 Down Broughnamaddy near Rostrevor! '92—Stewart.

Hieracium murorum L.

Census 11—East 7, Centre 1, West 3.

2 Kerry N. ‡Killarney '97—Scully.
5 Cork E. †Fota '95—Phillips. Midleton—Allin *Fl.*
9 Clare Ballyvaughan '95—P.
14 Queen's Maryborough '96, abundant on railway bank—P.
19 Kildare Railway bank at Curragh abundant '97—P.
28 Sligo Ben Bulben and Lough Gill '84—B. & V. *112.*
31 Louth Carlingford Mountain, Stewart—*Cyb.* II.
37 Armagh Dobbin's Walk at Armagh (v. *pellucidum*) (Hart)—P. *795.*
38 Down R. Bann in Mourne M. ['89]—S. & P. *873.* Rostrevor, Newtownards—*Fl. NE.*
39 Antrim Glenariff '93—Shoolbred *837.* Frequent—*Fl. NE.*
40 L'derry Newtowncrommelin and Garvagh (v. *microcladium*), '95—Brenan *168.* Rare.

Hieracium stenolepis Lindeb.

28 Sligo Carrowkee '97—P.
29 Leitrim Shore of Lough Gill '99—P.
39 Antrim Garron and Glenariff '93—Shoolbred *837.* Frequent.
40 L'derry Benevenagh '93—Shoolbred *837.*

Hieracium euprepes F. J. Hanb.

39 Antrim Cave Hill '96, Stewart—B.E.C. '96. Redbay—Shoolbred *837.* Sallagh Braes abundant—Stewart.
40 L'derry Benevenagh ['86] (Stewart)—P. *696.*

Hieracium cæsium Fr.

Census 7—East 3, Centre 0, West 4.

9 Clare East of Ballyvaughan '92, Levinge—*Cyb.* II.
20 Wicklow Dargle—Hart '86 *390.*
28 Sligo Ben Bulben and L. Gill (var. *Smithii*) '84—B. & V. *112.*
34 Dongl. E. Coolcross—*Fl. Don.*
35 Dongl. W. Aghla Mountain—*Fl. Don.*
39 Antrim Glenariff '89—Stewart. Fair Head—*Cyb.* I.
40 L'derry Benevenagh, Stewart—*Fl. NE.*

Hieracium hypochæroides Gibs. (*H. Gibsoni* Backh.)

3 Cork W. Millstreet mountains (var. *saxorum*) '00—Phillips.
9 Clare Eagle Rock on Slievecarran '79—Corry *240*.

This plant should be looked for on Ben Bulben. Corry, the discoverer of the species in Ireland, recorded it definitely in his notes on the Ben Bulben flora (*248*), but Barrington and Vowell (*112*) state there "seems to be some doubt" about the specimens. Stewart collected on Ben Bulben a plant which Backhouse named "*H. Gibsoni* apparently: agrees with my specimens."

Hieracium vulgatum Fr.

Census 16—East 7, Centre 3, West 6.

1 Kerry S. Brandon mountain '83—Hart *381*.
2 Kerry N. Mangerton '99—Scully.
14 Queen's Maryborough (var. *inaculeatum*) '96—P.
16 Galw. W. Galway city '00—Phillips. Muckanaght—Hart *380*.
17 Galw. NE. Galway city '00—Phillips.
19 Kildare Liffey above Leixlip, More—*Cyb.* I. [Probably 19].
20 Wicklow Powerscourt—*Fl. Hib.* '36. Devil's Glen—Mackay *522*.
21 Dublin By the Liffey at Lucan '95, Colgan—*Cyb.* II.
27 Mayo W. SW. shore of Lough Conn '00—P.
30 Cavan Slievenakilla very rare '84—Stewart *859*.
31 Louth Carlingford '78—Stewart.
34 Dongl. E. Finn River above Stranorlar '93—*Fl. Don.*
36 Tyrone Omagh and Newtownstewart '96—Miss Knowles.
38 Down Conlig Hill c. '00—P. Mourne Mtns. r.—S. & P. *873*.
39 Antrim Glenariff '93—Shoolbred *837*. Frequent—*Fl. NE.*
40 L'derry Dungiven, Stewart: frequent—*Fl. NE.*

Often lowland, on walls and dry banks.

Hieracium sciaphilum Uechtritz.

7 Tipp. S. Cahir on limestone rocks '00—P.
19 Kildare Railway bank at Curragh '97—P.
35 Dongl. W. Near Kilmacrennan (probably this)—*Fl. Don.*
38 Down Saintfield (D. Redmond)—S. & P. *874*.

Hieracium gothicum Fr.

Census 6+(1)—East 3+(1), Centre 0, West 3.

3 Cork W. Bantry (Carroll)—Allin *Fl.* '83.

(4 Cork Mid Carrigrohane '98, one plant, casual?—Phillips.)
16 Galw. W. Connemara—Backhouse '56 *82*.
20 Wicklow Head of Glenmalure, Carroll—*Cyb.* I.
35 Dongl. W. Eanymore water—*Fl. Don.*
38 Down Tollymore Park and R. Bann in Mourne Mountains (var. *Stewartii*) '92 (Stewart)—Hanbury *360*.
39 Antrim Glendun '93—Shoolbred *837*. Very rare—*Fl. NE.*

Hieracium sparsifolium Lindeb.

34 Dongl. E. Mournebeg river—*Fl. Don.*
35 Dongl. W. Carrick '91—*Fl. Don.*
36 Tyrone Mournebeg river—*Fl. Don.*

Hieracium rigidum Hartm.

33 Ferman. Marble Arch (v. *tridentatum*) (Brenan)—More '72 *614*.
35 Dongl. W. River into Dunlewy Lake (var. *pullatum*), Owengarve River (vars. *acrifolium*, *glabrescens*, *tridentatum*), Doochary bridge (var. *glabrescens*)—*Fl. Don.*

Hieracium prenanthoides Vill.

40 L'derry Garvagh—Backhouse '56 *82*. Bovevagh, D. Moore—*Cyb.* I.

Hieracium strictum Fr.

Census 5—East 2, Centre 0, West 3.

20 Wicklow Glenmalure '52—Carroll *192*.
34 Dongl. E. River Eglish (var. *opsianthum*)—*Fl. Don.*
35 Dongl. W. Falcarragh, &c.: rare (var. *opsianthum*)—*Fl. Don.*
39 Antrim Garron Head—Backhouse '56 *82*.
40 L'derry Garvagh, D. Moore—*Cyb.* I.

Hieracium corymbosum Fr.

Census 8—East 6, Centre 0, West 2.

13 Carlow By the Barrow at Graiguenamanagh ['84]—Hart *390*.
20 Wicklow Head of Glenmalure '52—Carroll *192*.
31 Louth Above Omeath ['83]—Hart *390*.
34 Dongl. E. By the Finn River—*Fl. Don.*
35 Dongl. W. Glenties, &c.: local—*Fl. Don.*
38 Down Spinkwee River ['82], Stewart—*Fl. NE.*
39 Antrim Glendun '93—Shoolbred *837*. Rare—*Fl. NE.*
40 L'derry Garvagh, Magilligan, D. Moore—*Cyb.* I. and *Fl. NE.*

Hieracium auratum Fr.

34 Dongl. E. By the Mournebeg River—*Fl. Don.*
35 Dongl. W. Glenties, &c.: very rare—*Fl. Don.*
38 Down Tollymore Park '98—Druce. Mourne Mountains f.
39 Antrim Cranfield on L. Neagh '97—B.N.F.C. *134*. Frequent.

North only: one of the commoner Hawkweeds in the north-east.

Hieracium crocatum Fr.

Census 6—East 4, Centre 0, West 2.

16 Galw. W. Ballynahinch—Backhouse '56 *82*.
31 Louth North base of Carlingford Mountain ['83]—Hart *390*.
34 Dongl. E. Glennagivney—*Fl. Don.*
38 Down Shimna River ['90]—S. & P. *873*. Rare.
39 Antrim Glendun, &c. '93—Shoolbred *837*. Frequent.
40 L'derry Benevenagh, Stewart—*Cyb.* I. Dungiven—Hart *390*.

Hieracium boreale Fr.

Census 12—East 8, Centre 2, West 2.

1 Kerry S. Morley's Bridge '99: rare—Scully.
3 Cork W. Glengariff, Babington *in hb.*—*Cyb.* II.
11 Kilkny. Barrow at Graiguenamanagh '84—Hart *383*.
13 Carlow Borris '98—P. Slaney below Clonegall '81—Hart *371*.
14 Queen's Near Maryborough '96—P.
19 Kildare Ballitore hill, Carroll—*Cyb.* I.
20 Wicklow Annamoe, Laragh, Glendalough, '93—P. Centre f.
21 Dublin Dodder above Old Bawn '96, Colgan—*Cyb.* II.
23 Westmth. Coosan Point on L. Ree '85–6—B. & V. *113*.
38 Down Shimna River '97—P.
39 Antrim Cave Hill '90—P. Very rare—*Fl. NE.*
40 L'derry Near Garvagh and Magilligan, D. Moore—*Cyb.* I.

Hieracium umbellatum L.

Census 17—East 5, Centre 3, West 9.

1 Kerry S. River Caragh, Scully—*Cyb.* II. Rare.
2 Kerry N. Killarney '00: rare and local—Scully.
3 Cork W. Inchigeela lakes '97—Phillips.
9 Clare Lushag Rocks, &c. on Lough Derg '96—Colgan.
10 Tipp. N. Ryan's Point and Scilly I. on Lough Derg '96—Colgan.

11	Kilkny.	Granny, Chandlee—*Cyb.* I.
15	Galw. SE.	Hare Island, &c. on L. Derg '96—Colgan. L. Derg I.
16	Galw. W.	L. Inagh '98—Colgan. Maam—Marshall. L. Corrib.
20	Wicklow	Devil's Glen '98—Colgan. Frequent in centre.
21	Dublin	R. Dodder at Old Bawn '00: rare—Colgan.
23	Westmth.	Hare Island on Lough Ree '85–6—B. & V. *113*.
27	Mayo W.	Lough Conn '00—P. Lough Cullin, More—*Cyb.* I.
33	Ferman.	Namanfin I. on Lower L. Erne '82–3—Barrington *108*.
34	Dongl. E.	Finn River and frequent in the south—*Fl. Don.*
35	Dongl. W.	Ray River: throughout, frequent in south—*Fl. Don.*
39	Antrim	Glenariff, D. Moore—*Cyb.* I. (Extinct on Harbour I.)
40	L'derry	Benevenagh, D. Moore—*Cyb.* I.

Hypochæris radicata L. Long-rooted Cat's-ear.

Divisions all. Abundant.

Hypochæris glabra L.

40	L'derry.	Magilligan '00—Lett and Waddell *480*.

Leontodon hirtus L. Hawkbit (genus).

Census 37—East 14, Centre 11, West 12.

1	Kerry S.	Kenmare '99: frequent—Scully.
2	Kerry N.	Listowel '99: frequent—Scully.
3	Cork W.	Dunmanway '00: common—Phillips.
4	Cork Mid	Donoughmore '96: common—Phillips.
5	Cork E.	Glanmire '00: common—Phillips.
6	Waterfd.	Dungarvan '99: frequent throughout—P.
7	Tipp. S.	Ballinure '98, Fethard '97—P.
8	Limrck.	Askeaton '00—P. Frequent in the north.
9	Clare	Ballyvaughan '95—Colgan. Inishmore '95—P.
10	Tipp. N.	Nenagh '99: frequent—P.
11	Kilkny.	Thomastown '98: frequent—P.
12	Wexford	Wexford '97—Marshall. Frequent throughout.
13	Carlow	Ballintemple '99: frequent throughout—P.
14	Queen's	Maryborough '96: common—P.
15	Galw. SE.	Loughrea '97: frequent throughout—P.
16	Galw. W.	Inishmacdara '96—P. Common.
17	Galw. NE.	Knockmae '99: local—P.
18	King's	Lough Goura '98: frequent throughout—P.
19	Kildare	Kildare '97: north and centre common—P.

20	Wicklow	Avondale '99: common—P.
21	Dublin	Portrane '00: common—Colgan.
22	Meath	Bective '00: common—P.
23	Westmth.	Knock Eyon '99, and frequent in west—P.
24	Longfd.	Woodlawn '98, and frequent by Lough Ree—P.
25	Roscomn.	Mote Park '97: common—P.
26	Mayo E.	Callow '00—P. Frequent.
27	Mayo W.	West of Castlebar '99—Marshall.
28	Sligo	Rosses Point and Ballymote '97—P.
29	Leitrim	Glenade and Annaghearly Lough '99—P.
30	Cavan	L. Oughter, Farnham, Mount Nugent, '96—P.
31	Louth	Braganstown '97: frequent in south half—P.
33	Ferman.	Crum Castle '81-2—Barrington *108*.
34	Dongl. E.	Below Kilderry and near Donegal—*Fl. Don.*
35	Dongl. W.	Lough Eske—*Fl. Don.*
37	Armagh	Near Armagh: north only, frequent, '92—P.
38	Down	Craigavad '00—P. Very rare and local.
39	Antrim	Macedon '86—P. Lagan, Templeton—*Fl. NE.*

Becomes rare in the north.

Leontodon hispidus L.

Census 24+(1)—East 10, Centre 9, West 5+(1).

1	Kerry S.	Castlegregory, D. Moore—*Cyb.* I.
2	Kerry N.	Killarney, Babington—*Cyb.* I.
(3	Cork W.	Not rare—Allin *Fl.* '83. Not seen—Phillips.)
4	Cork Mid	Flat Head '99—Scully *835*. Frequent—Phillips.
5	Cork E.	Youghal '00: frequent—Phillips.
6	Waterfd.	Lismore '97, Clonmel '99—P.
7	Tipp. S.	Cahir '00: frequent throughout—P.
8	Limrck.	Mullagh '00—P.
10	Tipp. N.	Templemore '00—Phillips.
11	Kilkny.	Kilkenny '00—Phillips. Thomastown—P. Kilmacow.
12	Wexford	Rosslare '82—Hart *384*. Very rare.
13	Carlow	Goresbridge and †near Gowlin '99—P.
14	Queen's	Mountrath '97—P. Common.
15	Galw. SE.	Moyode '97, Portumna '98—P.
16	Galw. W.	NE. of Ross Lake '99—P. Galway, Melville—*Cyb.* I.
17	Galw. NE.	Knockmae and north of Tuam '99—P.
18	King's	Clara '99: frequent—P.
19	Kildare	Kildare '98: north and centre common—P.

20	Wicklow	Blessington '98—P. Roundwood—*614*. Murrough.
21	Dublin	Greenhills '00 : frequent—Colgan.
22	Meath	Kilmessan '00 : frequent in centre and west—P.
23	Westmth.	Moate '99—P. Centre and west, rather rare.
24	Longfd.	Elfeet Bay '00, Priest's Island '99—P.
25	Roscomn.	Mote Park '97 : throughout, not common—P.
26	Mayo E.	Manulla '00—P. Cong, Hollymount—*Cyb.* I., II.

Southern half of Ireland; very rare on the west coast, elsewhere more or less frequent. Distinctly calcicole. A line joining Drogheda and Killala defines its northern limit. Records from 34 and 40 are omitted as probably errors.

Leontodon autumnalis L.

Divisions all. Common.

Taraxacum officinale Web. Dandelion.

Divisions all. Abundant.

‡**Lactuca muralis** Fresen. Lettuce (genus).

Census 7—East 5, Centre 1, West 1.

2	Kerry N.	*Glenflesk Castle '97—Scully.
4	Cork Mid	*About Cork '00—Phillips.
19	Kildare	Ballintore, an escape, Carroll—*Cyb.* I.
20	Wicklow	Laragh in some abundance '97, Scully—*Cyb.* II.
21	Dublin	Bank at St. Anne's near Clontarf '94, Hart—*Cyb.* II.
23	Westmth.	†Ballynagall '99—P.
31	Louth	Abundant at Collon, Mackay—*Fl. Hib.* '36.

Sonchus oleraceus L. Sowthistle (genus).

Divisions all. Common.

Sonchus asper Hoffm.

Divisions all. Common.

Sonchus arvensis L.

Divisions all. Locally common.

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Tragopogon pratensis L. Goat's-beard.

Census 23—East 8, Centre 11, West 4.

5	Cork E.	Castletownroche '97 : rare—Phillips.
7	Tipp. S.	Goold's Cross '00—Phillips. Frequent on S. margin—P.
8	Limrck.	Askeaton '00—P. Frequent in the north.
10	Tipp. N.	Roscrea '00—Phillips. Friar's Lough '97—P.
11	Kilkny.	Callan '00—Mrs. Persse! Frequent along the Nore—P.
13	Carlow	Leighlinbridge and Borris '99—P.
14	Queen's	Abbeyleix '00—Phillips. Throughout frequent.
15	Galw. SE.	L. Cooter, Craughwell, '00—P. Garryland—*Cyb.* I.
16	Galw. W.	Near Galway, Melville—*Cyb.* I.
17	Galw. NE.	Near Ahascragh '96—P.
18	King's	Near Frankford '00—P. Frequent.
19	Kildare	Curragh '97—P. Frequent in the south and east.
20	Wicklow	Near Bray '94—P. Rathnew; Fassaroe; Murrough.
21	Dublin	Near Malahide '00 : frequent—Colgan.
22	Meath	Navan '00 : frequent throughout—P.
23	Westmth.	Athlone '99—P. Killua demesne '94—Levinge *485*.
24	Longfd.	Saint's Island in L. Ree '99—Miss R. Smith!
25	Roscomn.	West of Athlone '99—P.
26	Mayo E.	Hollymount, More—*Cyb.* I.
27	Mayo W.	Westport and west of Castlebar '99—Marshall.
31	Louth	Dunleer '00 : frequent as far north as Dundalk—P.
32	Monaghn.	Drumreaske '00—W. de V. Kane.

Chiefly in middle Ireland, commoner in the east than the west. Absent from the north and from the extreme south.

Lobelia Dortmanna L. Water Lobelia.

Census 18—East 6, Centre 1, West 11.

1	Kerry S.	Waterville '00 : frequent—Scully.
2	Kerry N.	Killarney '99 : frequent in the south—Scully.
3	Cork W.	Inchigeela '00 : frequent in the west—Phillips.
6	Waterfd.	Ballyscanlan Lough '99—P.
9	Clare	L. Effernan '96—West. Monmor bog—Carter *195*.
15	Galw. SE.	Esker Lough near Kinvarra '97—Mrs. Joyce!
16	Galw. W.	Glen Inagh '98—Colgan. Very frequent.
17	Galw. NE.	Wet bog near Killower Lough '99—P.
20	Wicklow	Lough Dan '94—P. Glendalough; Lower L. Bray.
26	Mayo E.	Ballymore L. '00—P. L. Corrib—*545*. L. Mask.

27	Mayo W.	Achill Sound '99—Marshall. Frequent.
28	Sligo	Easky Lough, &c. in Ox Mountains '96—Colgan.
34	Dongl. E.	Meendoran '96—Hart *405*. Throughout f.—*Fl. Don.*
35	Dongl. W.	Aranmore &c.: throughout frequent—*Fl. Don.*
37	Armagh	Lough Ross '92—P. Frequent along L. Neagh shores.
38	Down	Blue Lough '92—P. Very rare—*Fl. NE.*
39	Antrim	Craigfad L. '90—P. Portmore, L. Neagh—*Fl. NE.*
40	L'derry	Lough Beg, D. Moore—*Cyb.* I.

Local, and chiefly about the mountains.

Jasione montana L. Sheep's Scabious.

Census 29—East 14, Centre 6, West 9.

Strongly calcifuge, and in consequence very irregularly distributed. Common in 1, 2, 3, 4, 5, 6, 12, 13, 16, 20, 27, 34, 35, 38, 39, 40: local or rare in the following:—

7	Tipp. S.	Slievenaman and Galtees '00—P.
9	Clare	Lisdoonvarna '00—Miss Knowles. Local.
10	Tipp. N.	Keeper Hill '80—Hart *369*.
11	Kilkny.	Tory Hill '99—P. Frequent in south.
14	Queen's	Arderin '97—P.
18	King's	Near Arderin '97—P.
19	Kildare	Rathmore '98, Kilcullen, near Baltinglass—P.
21	Dublin	Howth '00: local—Colgan.
26	Mayo E.	Clonbur '95—Marshall.
28	Sligo	L. Easky '96—Colgan. L. Gara '97—P.
31	Louth	Clogher Head '96, and common in NE.—P.
32	Monaghn.	Castleblayney '96—P.
37	Armagh	South only, common, '92—P.

Not yet recorded for 8, 15, 17, 22, 23, 24, 25, 29, 30, 33, 36.

Wahlenbergia hederacea Reichb. Ivy-leaved Bell-flower.

Census 7—East 4, Centre 0, West 3.

1	Kerry S.	Kenmare '94: rare, locally abundant—Scully.
2	Kerry N.	Clydagh '99: rather frequent in the south—Scully.
3	Cork W.	Near Skibbereen '97: rare—Phillips.
4	Cork Mid	Near Inniscarra '96: rare—Phillips.
12	Wexford	Ferns '97—D.N.F.C. *306*. Centre and NW. frequent.
20	Wicklow	Glencree '99—D.N.F.C. *311*. Sugarloaf; Gold Mine R.
21	Dublin	Glencullen '99—Colgan.

South and south-east.

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Campanula Trachelium L. Nettle-leaved Bell-flower.

Census 4—East 2, Centre 2, West 0.

11	Kilkny.	Callan '00—Mrs. Persse. Nore v. f., Barrow v. r.
13	Carlow	By the Barrow above St. Mullin's '98—P.
14	Queen's	Nore near Abbeyleix and Durrow '84—Hart *388*.
18	King's	Barrow Bank House '84—Hart *383*.

Occupies an inland area in the south-east. An escape in 4, 10, 20, 21, and probably elsewhere.

***Campanula rapunculoides** L.

Census 10—East 8, Centre 2, West 0.

11	Kilkny.	Near Kilkenny '60–'94, J. G. Robertson—*Cyb.* II.
20	Wicklow	Murrough—*Guide* '78.
21	Dublin	Rush established '93—Colgan. Bray '72—More *614*.
22	Meath	Sandy fields at Laytown '96—P.
24	Longfd.	Railway near Longford '00—P.
31	Louth	Shore at Termonfeckin established '96—P.
36	Tyrone	Dungannon '96—Miss Knowles.
38	Down	Dry fields at Newcastle '95, and Rostrevor '97—P.
39	Antrim	Established near Broughshane '91—P.
40	L'derry	Kilrea '94—P.

Appears quite naturalized along the east coast.

Campanula rotundifolia L. Hare-bell.

Census 28—East 8, Centre 8, West 12.

1	Kerry S.	Caragh Lake '00—Scully. Frequent.
2	Kerry N.	Killarney '99 : rather frequent—Scully.
3	Cork W.	Millstreet '00, Mount Gabriel '96 : rare—Phillips.
6	Waterfd.	Muskry Lough '00—P. Galtees and Knockmealdowns.
9	Clare	Lisdoonvarna '00—Miss Knowles. C. in N., ? rare in S.
10	Tipp. N.	Dromineer '00—Phillips. Frequent on Lough Derg.
15	Galw. SE.	Woodford '98—P. Common in W. and in S.E.
16	Galw. W.	Muckanaght '98—Colgan. Common.
17	Galw. NE.	SW. of Knockmae and common on Lough Corrib '99—P
20	Wicklow	Lugnaquilla '97—Colgan. Frequent.
21	Dublin	Rush sandhills '00 : local—Colgan.
23	Westmth.	Hare Island on Lough Ree '99—P.
24	Longfd.	Castlerea '00, and common on Lough Ree—P.
25	Roscomn.	Athlone '99, Galey '97—P.

26	Mayo E.	Ballinrobe '91—Mrs. Persse! Clonbur—M. & S. *545*.
27	Mayo W.	South end of Lough Conn '00—P. Frequent.
28	Sligo	Ballysadare '00—P. Frequent throughout.
29	Leitrim	Drumahaire '99, and frequent in the north—P.
30	Cavan	Frequent in the north-west '81—Stewart *854*.
31	Louth	Carlingford '00—P.
33	Ferman.	Heron Isle on Lower L. Erne '92—P. Locally frequent.
34	Dongl. E.	Brown Hall '00—P. Throughout, frequent—*Fl. Don.*
35	Dongl. W.	Throughout, frequent—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles.
37	Armagh	Centre and south, rare, '92—P.
38	Down	Newcastle '97—P. Common—*Fl. NE.*
39	Antrim	Galgorm '99—Miss Knowles. Common—*Fl. NE.*
40	L'derry	Bellarena '98—Mrs. Leebody. Common—*Fl. NE.*

A very local plant, being almost confined to the coasts, the larger lakes, and some of the mountain groups.

Vaccinium Vitis-Idæa L. Cowberry.

Census 19—East 9, Centre 6, West 4.

6	Waterfd.	Above Stilloge Loughs '82–3—Hart *381*.
7	Tipp. S.	L. Borheen and L. Muskry in Galtees '80—Hart *372*.
10	Tipp. N.	Keeper Hill '80—Hart *369*.
13	Carlow	Blackstairs—Hart '83 *381*.
20	Wicklow	Croaghanmoira '97—Colgan. F. on the high grounds.
21	Dublin	Seecawn Mountain '00—Colgan.
23	Westmth.	Bracklin bog '78, D. Moore—*Cyb.* II.
27	Mayo W.	Nephin '00—P. Rare on the mountains.
28	Sligo	Cloonacool Lough '96—Colgan. Ben Bulben—*Cyb.* II.
30	Cavan	Tent's Mountain, &c. '81—Stewart *854*.
31	Louth	Carlingford Mountain '00—P.
33	Ferman.	Drumbad, &c. '81—Stewart *854*.
34	Dongl. E.	Slieve Snaght '98—Hart *405*. N. only, v. r.—*Fl. Don.*
35	Dongl. W.	Magherawarden '98—Hart *405*. Local—*Fl. Don.*
36	Tyrone	Dart '92—P. *687*. Dungannon—*Fl. Ulst.* Drumquin.
37	Armagh	Slieve Gullion '93—P. Bogs S. of L. Neagh—*Cyb.* II.
38	Down	Slieve Bearnagh '92—P. Mourne Mountains frequent.
39	Antrim	Bog near Randalstown '98—Adams *3*. Rare—*Fl. NE.*
40	L'derry	Between Kilrea and Garvagh '94—P. Rare—*Fl. NE.*

Chiefly on the high grounds of the east and north. At low levels (100 to 400 feet) on bogs in 23, 36, 37, 39, 40.

Vaccinium Myrtillus L. Bilberry.

Divisions all. Common. Calcifuge.

Vaccinium Oxycoccus L. Cranberry.

Census 30—East 11, Centre 9, West 10.

1	Kerry S.	Glencar '89—Scully.
2	Kerry N.	Gneevgullia '98—P. Castleisland '88—Scully.
3	Cork W.	Near Dunmanway, E. Murphy—*Cyb.* I.
6	Waterfd.	Near Clonmel, Miss S. Grubb! Glenagad—*Cyb.* I.
7.	Tipp. S.	Ballinure '98—P.
9	Clare	Lisdoonvarna '00—W. Fogerty. Monmor bog—*863*.
10	Tipp. N.	Rapla '99, Barracurragh '97—P.
11	Kilkny.	North of Tory Hill '99, Urlingford '98—P.
13	Carlow	On cut-away bog near St. Mullin's '98—P.
14	Queen's	Maryborough '96, Boleybeg bridge '98—P.
15	Galw. SE.	St. Clerans '00—Mrs. Joyce! Woodford; Castle Taylor.
17	Galw. NE.	Clonbrock '97—P. About Tuam—*Ir. Fl.*
18	King's	Near Philipstown '00: frequent—P.
19	Kildare	Nurney '97, Carbury '96—P.
20	Wicklow	Glencree, Scully—*Cyb.* II. Northern half, rare.
22	Meath	Near Navan '96, Kildalkey, L. Sheelin, Drumcondra—P.
23	Westmth.	Knock Drin, &c.—Levinge '94 *484*. Inny Jnct.—Hart.
24	Longfd.	Near Saint's Island '99—Miss R. Smith! F. in west.
25	Roscomn.	Mount Talbot and Lough Gara '97—P.
26	Mayo E.	Hollymount, More—*Cyb.* II.
27	Mayo W.	Mallaranny '99—Marshall. Rathroeen L. '00—P.
28	Sligo	Lough Gara '97—P.
29	Leitrim	Drumod '99—P.
31	Louth	Ardee Bog '97—P.
34	Dongl. E.	Lough Keenaghan near Belleek—*Fl. Don.*
36	Tyrone	Verner's Br. '96—Mrs. Leebody. L. Ouske; Tamnamore.
37	Armagh	Bogs along Lough Neagh '92—P.
38	Down	Saul Camp '90—P. Becoming rare.
39	Antrim	Slemish '00—Miss Knowles. Rare—S. & P. *874*.
40	L'derry.	Lough Ouske '92—P. Rare—*Fl. NE.*

Widely spread all over the Central Plain, thinning out on the east and west coasts and towards the north and south. The distribution generally follows that of the red bogs; in the north-east and south-east, drainage is interfering with it.

Arbutus Unedo L. Strawberry-tree.

1 Kerry S. Cloonee '00 : local—Scully.
2 Kerry N. Killarney '00 : south only, locally abundant—Scully.
3 Cork W. Glengariff and Adrigole '94—Phillips. SW. only, rare.
Now very rare except in the Killarney neighbourhood.

Arctostaphylos Uva-ursi Spreng. Bear-berry.

Census 7—East 1, Centre 0, West 6.

9 Clare Near Cratloe '97, Bentley—*Hb.* L.F.C.! Burren c.
15 Galw. SE. Lough Fingall '99—P. Castle Taylor '85—Mrs. Joyce!
16 Galw. W. Derryclare '99—Colgan. Widespread and frequent.
27 Mayo W. Achill Island '99—Colgan. Widespread, frequent.
34 Dongl. E. Near Dunree—*Fl. Don.*
35 Dongl. W. Aranmore, &c. : throughout, local—*Fl. Don.*
39 Antrim Fair Head '37, G. C. Hyndman!—*Cyb.* II.

Andromeda Polifolia L.

Census 24—East 9, Centre 10, West 5.

7 Tipp. S. Ballinure '98—P.
8 Limrck. Castleconnell bog '00—R. D. O'Brien!
9 Clare Opposite Plassy, Carroll; Tulla, Warren—*Cyb.* I.
10 Tipp. N. Lough Ourna '99—P. Frequent.
11 Kilkny. Urlingford '98—P.
13 Carlow Near St. Mullin's '98—P.
14 Queen's Mountrath '97 : frequent—P.
15 Galw. SE. Marble Hill and near Woodford '98—P.
17 Galw. NE. Barbersfort '99, Clonbrock '96—P.
18 King's Frankford '00 : frequent throughout—P.
19 Kildare Robertstown '98, Nurney, Carbury—P. Ballitore.
20 Wicklow South of Lough Bray '94—P. North-east only, v. r.
21 Dublin Kippure '93—P.
22 Meath Near Navan '96, Ferns Lock, Kildalkey, L. Sheelin—P.
23 Westmth. Coole '99—P. Frequent.
24 Longfd. Trillickacurry '98 : common in W., rare in E.—P.
25 Roscmn. Mote Park '97 : throughout, frequent—P.
26 Mayo E. Hollymount '54—More *ooo.*
28 Sligo Lough Gara '97—P.
29 Leitrim Drumod and Rinn Lough '00—P.
30 Cavan Lough Oughter '96, Mount Nugent, Drumhawnagh—P.

31 Louth Ardee bog '97—P.
37 Armagh Tartaraghan (G. Robinson)—More *600*.
38 Down Wolf Island bog ['65], Stewart—*Fl. NE.*

Essentially a Central Plain plant, as the census numbers will show, abounding on the red bogs. Becomes rare in the north even in inland divisions, and likewise in the south.

Calluna vulgaris Salisb. Ling.

Divisions all. Common.

Erica Tetralix L. Cross-leaved Heath; Bell-Heather.

Divisions all. Common.

Erica Mackaii Hooker.

16 Galw. W. Craigga More '96—P. Carna '74—More *615*. One mile from Roundstone '45—Ogilby *653*.

Erica cinerea L. Heather.

Divisions all, *except 23 Westmeath, 24 Longford.* Locally abundant.

Requiring drier ground than *Calluna* and *E. Tetralix*, this species does not often grow on the red bogs, where its allies are so abundant; and being like them strongly calcifuge, suitable habitats are frequently wanting in the Central Plain, where limestone predominates. *E. cinerea* generally appears on rough ground as soon as the limestone is left. On limestone mountains, the covering of peat is often sufficiently thick to allow the plant to grow luxuriantly. There are a few marked exceptions to its calcifuge proclivities. In Galway NE. the only station (Coolaran) is bare limestone "crags," amid a characteristic calcicole flora; and in Galway W., near Ross Lake, it is abundant on esker-like ridges formed entirely of limestone gravel and boulders. It also occurs on the Aran Islands, which are mere shelves of limestone, devoid of a peaty covering.

Erica mediterranea L. Mediterranean Heath.

16 Galw. W. Urrisbeg '96—P. Kylemore and Salruck, J. MacKinnon —*Cyb.* II.
27 Mayo W. Both sides of Lough Conn '00—P. Locally abundant along the coast.

Dabeocia polifolia D. Don. St. Dabeoc's Heath.

16 Galw. W. Glen Inagh '98—Colgan. Throughout, often abundant.
26 Mayo E. Between Lisloughry and Lackafinna, Miss Jackson—*Cyb.* II. †Martin's Island in L. Mask below Ballinrobe '91—Mrs. Persse!
27 Mayo W. Curraun Achill, Dillwyn—*Cyb.* II. S. half, local.

I am not satisfied about the Lough Mask station. Only one plant was seen, and introduced trees are near.

Pyrola rotundifolia L. Winter-green (genus).

(18 King's "Bog by Roscre"—How: *Phytologia*, 1650. Probably this species).
23 Westmth. Scraw Bog and Lisclogher Bog—Levinge '94 *484*. Multyfarnham '71—Moore *592*.

Pyrola media Sw.

Census 8—East 3, Centre 1, West 4.

9 Clare Above Gleninagh '95—O'Kelly! Burren only, frequent.
28 Sligo Ben Whiskin, Adm. Jones; Hazlewood, Wynne—*Cyb.* I.
34 Dongl. E. Carrowkeel, &c.: Inishowen only—*Fl. Don.*
35 Dongl. W. Truskmore '98—Hart *405*. North only, f.—*Fl. Don.*
36 Tyrone Strabane '96—Miss Knowles. Near Pomeroy—*Cyb.* II.
38 Down Conlig Hill '00—P. (Ballygowan bog, 1797—*Fl. NE.*)
39 Antrim Skerry '99—Miss Knowles. Rare—*Fl. NE.*
40 L'derry NW. of Kilrea! '94—Miss Knowles. Rare—*Fl. NE.*

Confined to the north and west.

Pyrola minor L.

Census 6+(1)—East 4, Centre 1, West 1+(1).

20 Wicklow Vale of Ovoca (spec. sent to. D. Moore)—*Cyb.* I.
23 Westmth. Ballynegall, Tyrrell's Pass, D. Moore—*614* and *Cyb.* I.
29 Leitrim Wood near Lurganboy '99—P.
(35 Dongl. W. Dunfanaghy, E. Murphy—*Fl. Hib.* '36. ?—*Fl. Don.*)
38 Down Tollymore Park '00—Waddell.
39 Antrim Slemish '98—Miss Knowles. Rare—*Fl. NE.*
40 L'derry Errigal Banks near Garvagh '95—P. Rare—*Fl. NE.*

Widely but very sparingly distributed. Not recently seen in Wicklow, Westmeath, or Donegal, though searched for, but in view of its sparse growth this has not much significance.

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Pyrola secunda L.

39 Antrim Glenarm, Sallagh Braes, Agnew's Hill [about 1835], D. Moore—*Cyb.* I.
40 L'derry Errigal Banks near Garvagh '35, D. Moore—*Fl. Hib.* and *Cyb.* I.

Not seen in Ireland since Dr. Moore's original discovery of it: specimens of Dr. Moore's gathering, at Glasnevin and the National Museum, are right!

Hypopithys multiflora Scop. Yellow Bird's-nest.

Census 6—East 2, Centre 1, West 3.

2 Kerry N. Killarney '94—Scully.
8 Limrck. Curragh Chase! '00—G. Fogerty.
15 Galw. SE. Castle Taylor—More '55 *598*.
19 Kildare Moore Abbey—Wade 1804 *902*.
21 Dublin St. Catherine's—Mackay '25 *522*.
28 Sligo Dooney Rock on Lough Gill '96—Colgan. Hazelwood '71, Miss Wynne—*Cyb.* II.

Statice rariflora Drej. Sea-Lavender (genus).

Census 21—East 12, Centre 1, West 8.

1 Kerry S. Kenmare '99 : locally abundant—Scully.
2 Kerry N. Barrow Harbour '92 : locally abundant—Scully.
3 Cork W. Creagh '97, Goleen '96 : rare—Phillips.
4 Cork Mid Rochestown '00 : frequent—Phillips.
5 Cork E. Youghal '00 : frequent—Phillips.
6 Waterfd. Dungarvan '99—P. Tramore—Mrs. Persse! Youghal.
8 Limrck. Foynes '00—Miss C. O'Brien! Ringmoylan—*863*.
9 Clare Gleninagh '95, O'Kelly—*Cyb.* II.
11 Kilkny. Snowhill '99—P. Ballinlaw ferry—B. & G. *100*.
12 Wexford SW. corner of Wexford Harbour '97—Marshall *539*.
15 Galw. SE. Kilcolgan abundant, Oranmore, Kinvarra, '99—P.
16 Galw. W. Gentian Hill, Barna Head, '99—P. Clifden—*Cyb.* I.
20 Wicklow Wicklow '00—C. Waterfall.
21 Dublin Baldoyle '00 : frequent—Colgan.
22 Meath Laytown '96—P.

27 Mayo W. Killala, Rosserk, '00—P. Croaghpatrick—Hart *380*.
31 Louth Blackrock '00—Mrs Swan. Boyne and Dundalk c.—P.
35 Dongl. W. Glinsk '98—Hart *405*. Extreme N. and S., r.—*Fl. Don.*
37 Armagh Abundant by Newry River '92—P.
38 Down Mahee Island '00—P. Frequent; c. on Strangford L.
39 Antrim Larne Lough '98—P.

Local on the coasts, but widely distributed.

Statice occidentalis Lloyd.

Census 11—East 7, Centre 0, West 4.

2 Kerry N. Barrow Harbour '92—Scully.
5 Cork E. Near Ballycotton, Carroll—*Cyb.* I.
6 Waterfd. Ballyvoyle Head '99—P. Frequent.
9 Clare Fanore '00—Miss Knowles. Burran and Aran, local.
12 Wexford Courtown '94—P. Baginbun, Hook, '82—Hart *384*.
20 Wicklow Wicklow '00—C. Waterfall. Brittas Bay; near Arklow.
21 Dublin Howth '00: common—Colgan.
22 Meath Laytown '96—P.
31 Louth Clogher Head! '99—Miss R. Smith. Boyne '96—P.
34 Dongl. E. Knockglass '98—Hart *405*.
35 Dongl. W. Horn Head, &c.: rare—*Fl. Don.*

Local. Absent from the greater part of the west coast, and from the north-east.

Armeria maritima Willd. Sea-Pink; Thrift.

Census 27—East 13, Centre 2, West 12.

Maritime and sub-maritime divisions all, including Kilkenny, Tyrone, and Armagh. Common around the coast. Inland in the following stations in the west and north :—

1 Kerry S. Very frequent on the mountains.
2 Kerry N. Ross I. at Killarney, 80 feet above sea-level—*Cyb.* II.
16 Galw. W. Bencorr &c. '99—Colgan. F. on the Twelve Bens.
27 Mayo W. Nephin '00—P. Rare on the mountains.
35 Dongl. W. Errigal, Muckish, &c.—*Fl. Don.*
40 L'derry Top of Benevenagh '92—P.

The Ross Island station is interesting as being the only inland low-level habitat for the plant in Ireland.

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‡Hottonia palustris L. Water-Violet.

(21 Dublin *Pool on top of Howth '98—Miss R. Mahaffy *533*.)
38 Down Downpatrick '98—B.N.F.C. *136*. Crossgar '97—P. (*Holywood '91—P.)
(39 Antrim *Bog meadows abundant '86—P. *Cushendun '86—P.)

Known to have been introduced except at Crossgar and Downpatrick, where it has been known to grow for a hundred years. No doubt permanently established also at Bog Meadows, but in the other stations its circumscribed area will probably prevent its remaining long.

Primula vulgaris Huds. Primrose.

Divisions all. Common.

Primula officinalis Jacq. Cowslip.

Census 35—East 14, Centre 11, West 10.

1 Kerry S. Kenmare '98—P. Local—Scully.
2 Kerry N. Ballybunnion '99: rather frequent—Scully.
3 Cork W. Millstreet '00, Skibbereen '96: rare—Phillips.
4 Cork Mid Donoughmore '96: common—Phillips.
5 Cork E. Whitegate '00: common—Phillips.
7 Tipp. S. Ardmayle '98, Fethard '97—P.
8 Limrck. Curragh Chase, &c. '00—P. Frequent in the north.
9 Clare Cahir River '92—Levinge *482*.
10 Tipp. N. Lough Ourna '99—P. Common in north half.
11 Kilkny. Thomastown '98—P. Frequent.
12 Wexford †Duncannon '90: local—B. & M. *MS*.
13 Carlow Borris and Corries '00—Miss F. Wynne.
14 Queen's Maryborough '96, Mountrath '97—P.
15 Galw. SE. Loughrea '97—P. Widespread, frequent.
16 Galw. W. Clonbur '96—Marshall. Near Galway '95—P.
17 Galw. NE. Tuam '99, Menlo, Clonbrock—P.
18 King's Lough Goura '98: frequent—P.
19 Kildare Kildare '97: frequent in north and centre—P.
20 Wicklow Blessington '98, Delgany '94—P.
21 Dublin Lusk '00: common—Colgan.
22 Meath Bective '00: common except in the north—P.
23 Westmth. Knock Drin '99—P. Frequent throughout.
24 Longfd. Reynoldstown '99, near Roosky, Newtowncashel—P.
25 Roscomn. Mote Park '97: throughout, not common—P.

26	Mayo E.	Ballinrobe '94—Mrs. Persse! Clonbur '96—Marshall.
28	Sligo	Co. Sligo, Wynne—*Cyb.* I.
29	Leitrim	Rinn Lough '99—P.
30	Cavan	Lough Sheelin '85—P. *692.*
31	Louth	Killencoole '96—P.
33	Ferman.	Castle Coole '00—West. Belleisle, Lower L. Erne—*108.*
35	Dongl. W.	Near Marble Hill, and *L. Swilly shores—*Fl. Don.*
37	Armagh	‡Armagh, &c.: north only, rare—P. *701.*
38	Down	‡Rostrevor, W. Gray: very rare—*Fl. NE.* and *874.*
39	Antrim	*Near Crumlin established '91—P. ‡Rare—*Fl. NE.*
40	L'derry	Dungiven, †Derrynoid, Moore—*Cyb.* I. ‡—*Fl. NE.*

Distribution very unequal, and not yet worked out. Practically confined to the limestone, there being reason to suspect its being native in 12, 35, 37, 38, 39 and 40. Even in the Limestone Plain the Cowslip varies greatly in abundance.

Lysimachia vulgaris L. Yellow Loosestrife.

Census 40—East 15, Centre 13, West 12.

1	Kerry S.	Beaufort '90: rare—Scully.
2	Kerry N.	Killarney '00: rare—Scully.
3	Cork W.	Bantry '94: rare—Phillips.
4	Cork Mid	Inchagaggin (Alexander)—Power *Fl.* '45. Rare.
5	Cork E.	Castletownroche '00, Youghal '96: rare—Phillips.
6	Waterfd.	Blackwater above Lismore '84—Hart *388.*
7	Tipp. S.	Ardmayle '00—P. Loughmoe, Camus br.—Hart *385.*
8	Limrck.	Curragh Chase '00—P. Reboge, Doonass—*Hb.* L.F.C.!
9	Clare	Killaloe '96—Colgan. Shannon and Fergus frequent.
10	Tipp. N.	Nenagh '99, and common on Lough Derg—P.
11	Kilkny.	Thomastown '98: frequent along the Nore—P.
12	Wexford	Macmine '97—Marshall. Courtown; Wilton Ponds.
13	Carlow	Graiguenamanagh '98—P.
14	Queen's	Mountmellick '96—P. Nore, Barrow—Hart *383, 388.*
15	Galw. SE.	Marble Hill '98: throughout, frequent—P.
16	Galw. W.	Oughterard '99—P. F. along east margin—More *600.*
17	Galw. NE.	Clonbrock '96, Kilbeg ferry '99—P.
18	King's	Banagher '98: Shannon f.—P. Barrow r.—Hart *383.*
19	Kildare	Barrow at Moore Abbey '84—Hart *383.*
20	Wicklow	Ballinglen, Miss Kinahan—*Cyb.* II.
21	Dublin	Delvin River '93—Colgan *207.* And in the north, rare.
22	Meath	L. Sheelin '96, and frequent along the Boyne—P.

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23 Westmth. Lough Iron '99—P. Centre frequent; Lough Ree c.
24 Longfd. Lough Gowna '00, and frequent on the Shannon—P.
25 Roscomn. Corkip Lough '99: common throughout—P.
26 Mayo E. Claremorris '00—P. Clonbur '95—Marshall.
27 Mayo W. Lough Conn and Lough Cullin '00—P.
28 Sligo Annaghmore '00, L. Arrow—P. L. Gill—Colgan.
29 Leitrim Lough Melvin '99—P. Frequent in south half.
30 Cavan Farnham, L. Oughter, L. Ramor, '96—P.
31 Louth Kerney's Cross '97—P.
32 Monaghn. Ballybay Lough '98—W. de V. Kane. Frequent.
33 Ferman. Belcoo '00—P. Common on L. Erne—Barrington *108*.
34 Dongl. E. River Erne and Bundrowes River—*Fl. Don.*
35 Dongl. W. St. Johnston's (Mrs. Leebody), Lough Fern—*Fl. Don.*
36 Tyrone Strabane, Omagh, '96—Miss Knowles. Killybrick—*392*.
37 Armagh Dartrey Lodge '98—W. de V. Kane. Frequent '92—P.
38 Down Lough Leagh '90—P. Very rare.
39 Antrim Antrim '00—P. Lagan r.; Lough Neagh basin f.
40 L'derry Lough Beg '98—Druce. Lough Neagh basin frequent.

Chiefly along the courses of the larger rivers, and by the great lakes.

***Lysimachia Nummularia** L. Moneywort; Creeping Jenny.

Census 20—East 11, Centre 3, West 6.

3 Cork W. *Rosscarbery '91—Phillips.
6 Waterfd. ‡Near Tramore (Chandlee)—Carroll '57 *193*.
9 Clare Dromoland "apparently wild," T. Warren—*Cyb.* II.
11 Kilkny. By the Nore above Ballyragget '99—P.
12 Wexford Courtown '96—P. Monart (Miss Farmer)—More *614*.
13 Carlow By the Barrow near Borris '99—P.
17 Galw. NE. River Suck at Mount Talbot '97—P.
19 Kildare Athy '99—P. Liffey at Lodge Park, Douglas—*Cyb.* I.
22 Meath Oldbridge! '99—Miss R. Smith.
25 Roscomn. Mount Talbot '97—P.
29 Leitrim Mouth of Bonet River '99—P.
31 Louth About Collon—*Ir. Fl.* '33.
33 Ferman. Ballycassidy R. '99, Inishdivan '00—West. Local.
34 Dongl. E. *Near Guystown—*Fl. Don.*
35 Dongl. W. *Near Ramelton looking native, Dean Gwynn—*Fl. Don.*
36 Tyrone Omagh '96—Miss Knowles.
37 Armagh Grange '94, Tanderagee '92—P.
38 Down Quoile below Downpatrick '92—P. Rare—*Fl. NE.*

39 Antrim Crumlin waterfoot '99—Miss Knowles. R.—*Fl. NE.*
40 L'derry. Bann at Coleraine '94—P. Very rare—*Fl. NE.*

Well established in most of the above stations, but more thoroughly naturalized round Lough Neagh than elsewhere.

Lysimachia nemorum L. Yellow Pimpernel.

Divisions all, *except 22 Meath.* Frequent.

Glaux maritima L. Sea Milkwort; Black Saltwort.

Maritime and sub-maritime divisions all, including Kilkenny, Tyrone, and Armagh. Common on the coast.

Anagallis arvensis L. Scarlet Pimpernel; Shepherd's Weather-glass.

Divisions all. Frequent, but local in places.

Anagallis tenella L. Bog Pimpernel.

Divisions all. Frequent.

Centunculus minimus L. Bastard Pimpernel.

Census 15—East 7, Centre 1, West 7.

1 Kerry S. Near Upper Lake of Killarney '99 : rather rare—Scully.
3 Cork W. Schull '96 : rare—Phillips.
4 Cork Mid Rye Court (Carroll)—Allin *Fl.* '83.
5 Cork E. Ballycotton '96 : rare—Phillips.
9 Clare Dunbeg c., Kilkee to Loop Head, D. Moore—*Cyb.* I.
16 Galw. W. Inishbofin '75—More *616.* Clifden; Ballynahinch.
22 Meath Sand-dunes at Boyne mouth '96—P.
27 Mayo W. Mallaranny '99—Marshall. Erris, D. Moore—*Cyb.* I.
28 Sligo Near Cliffony, Syme—*Fl. Ulst.* '64.
33 Ferman. Gubbaroe Point on Lr. L. Erne '81–2—Barrington *108.*
35 Dongl. W. Rossgull, &c. : north only, rare—*Fl. Don.*
37 Armagh In two stations on Lough Neagh '92—P.
38 Down Near Comber! '00—Waddell. Frequent—*Fl. NE.*
39 Antrim Bushfoot '87—P. Rathlin Island—Stewart *857.*
40 L'derry Lough Beg, Stewart: f. on the north coast—*Fl. NE.*

Chiefly on the coast, and off the limestone. Extremely rare except in the north-east and south-west.

Samolus Valerandi L. Brookweed.

Divisions all, *except 7 Tipperary South.* Rare in a few of the inland divisions; common by the coast and on the shores of the large lakes.

Fraxinus excelsior L. Ash.

Divisions all. Frequent.

Ligustrum vulgare L. Privet.

Divisions all, *except 25, 26, 27, 31,* but with little or no claim to be included in the indigenous flora, except in the following:—

6	Waterfd.	Cliffs of Ballyvoyle Head, sandhills at Tramore, '99—P. Native and frequent on sea-cliffs—Hart *384*.
15	Galw. SE.	Limestone "crags" at Garryland, with *Rhamnus, Taxus,* &c. '00—P.
21	Dublin	Howth "native on steep grassy cliffs," Hart—*Fl. Howth*.

Microcala filiformis Hoffm. & Link.

1	Kerry S.	Cloonee '99: locally abundant—Scully.
2	Kerry N.	Lough Guitane '98: south only, rare—Scully.
3	Cork W.	Pass of Keimaneigh '97: frequent in the west—Phillips.

Chlora perfoliata L. Yellow-wort.

Census 25—East 10, Centre 9, West 6.

2	Kerry N.	Ballybunnion '89—Scully.
3	Cork W.	Lislevane '96: rare—Phillips.
4	Cork Mid	Crosshaven '00: rare—Phillips.
5	Cork E.	Rushbrook '00: frequent on limestone—Phillips.
6	Waterfd.	Tramore, Mt. Congreve, '99—P. Portlaw—Flemyng.
7	Tipp. S.	Fethard '98—P.
8	Limrck.	Adare '00—P. Common in the north.
9	Clare	Fanore '00—Miss Knowles. Burren c., Aran local.
10	Tipp. N.	Lough Ourna '99—P. North half common.
11	Kilkny.	Callan '00—Mrs. Persse. South half frequent.
12	Wexford	Wexford '96—Marshall. Frequent throughout.
13	Carlow	Bagenalstown '00—Miss Wynne!
14	Queen's	Emo '96—P. Frequent in the north-east.
15	Galw. SE.	Ardfry '99: c. in west—P. C. on L. Derg—Colgan.
16	Galw. W.	Roundstone '96—P. Inveran—Colgan. C. on E. edge.
17	Galw. NE.	Barbersfort '99: common throughout—P.

18	King's	Frankford '00: centre and west, frequent—P.
19	Kildare	Kildare '97: frequent throughout—P.
20	Wicklow	Wicklow '97, and f. on the coast northwards—P.
21	Dublin	Portrane '00: frequent—Colgan.
22	Meath	Navan '97: centre and east, not common—P.
23	Westmth.	Near Killucan '96—Colgan. Frequent in west—P.
24	Longfd.	Newtowncashel '00: Lough Ree frequent—P.
25	Roscomn.	Corkip Lough '99: frequent in the south—P.
26	Mayo E.	Balla '00—P. Ballinrobe—Mrs. Persse. Clonbur.

Rare in Kerry and Cork. Frequent northward till it reaches a line drawn from Drogheda to Westport, where it stops rather abruptly. Essentially a Central Plain plant, and calcicole, its frequency in Wexford furnishing a notable exception.

Erythræa Centaurium Pers. Centaury.

Divisions all. Frequent.

Erythræa pulchella Fr.

Census 6—East 4, Centre 1, West 1.

3	Cork W.	Bantry, Glandore, J. Sullivan—*Cyb.* I. Cape Clear—*287*.
5	Cork E.	Youghal (Miss Ball)—Power *Fl.* '45.
6	Waterfd.	Back strand at Tramore abundant '99—P.
12	Wexford	Rosslare, Carnsore, Baginbun, Saltees, '82—Hart *384*. Curracloa (Morrison)—More *614*.
14	Queen's	Emo '96—P.
21	Dublin	North Bull! '00: rare—Colgan.

South and east coasts, with one inland station.

Gentiana verna L. Spring Gentian.

Census 5—East 0, Centre 1, West 4.

9	Clare	Black Head '99—Miss Knowles. Burren and Aran c.
15	Galw. SE.	Moyode '99—P. Locally c. in W., especially in SW.
16	Galw. W.	Gentian Hill '00—Phillips. Thence to Oughterard frequently—P. Cong, D. Moore—*Cyb.* I.
17	Galw. NE.	Knockmae '00: Lough Corrib and coast frequent—P. Castle Lambert and Athenry—Mrs. Joyce!
26	Mayo E.	Lough Carra near Moore Hall '94—Mrs. Persse.

Has a well-defined range on the limestone from Clare to Mayo.

Gentiana Amarella L. Felwort.

Census 29+(2)—East 10+(2) Centre 11, West 8.

3 Cork W. Ballinadee and Castlehaven—Allin *Fl.* '83. Rare.
4 Cork Mid Near Dunderrow—Allin *Fl.* '83.
5 Cork E. Near Doneraile (T. Wright)—Allin *Fl.* '83.
7 Tipp. S. Ballinure and Farranaleen '98—P.
8 Limrck. Mullagh and Askeaton '00—P.
9 Clare Lehinch '98, Mrs. Harris—*Hb.* L.F.C.! Throughout f.
10 Tipp. N. Dromineer '00—Phillips. NW. half frequent.
11 Kilkny. Thomastown and Urlingford '98—P.
12 Wexford Courtown '95—P. Frequent in NW.—B. & M. *103*.
13 Carlow Milford and Carlow '98—P.
14 Queen's Abbeyleix '98, Maryborough, Emo—P.
15 Galw. SE. L. Cooter '00, coast c.—P. Lough Derg f.—Colgan.
16 Galw. W. Gentian Hill '00—Phillips. Barna Head '99—P.
17 Galw. NE. Ballindooly '99: frequent—P.
18 King's Clara '99, Tullamore, Edenderry—P.
19 Kildare Near Rathmore '98—P.
20 Wicklow Blessington '98—P. Near Lough Dan—C. F. D'Arcy.
21 Dublin Portmarnock '00: local—Colgan.
22 Meath Boyne mouth '96, Drogheda '95—P.
23 Westmth. Moate'99—P. Drinmore—Levinge*484*. Athlone—*113*.
24 Longfd. Near Ballymahon '00, and common on Lough Ree—P.
25 Roscomn. Common about Ballinasloe '99—P.
26 Mayo E. Claremorris '00—P. Ballinrobe; south of L. Mask.
27 Mayo W. Killala '00—P. Bartragh Island—Mackay *522*.
28 Sligo Lough Talt '96—Colgan. Common in NE. '97—P.
30 Cavan Mount Nugent '96—P.
31 Louth Termonfeckin '96—P.
33 Ferman. Lower Lough Erne '81-2—Barrington *108*.
34 Dongl. E. Common between Bundoran & Ballyshannon—*Fl. Don.*
(39 Antrim? Kinbane Head, Templeton—*Fl. NE.*)
(40 L'derry? Keady Hill, D. Moore—*Cyb.* I.)

Frequent throughout the Central Plain, thinning out northwards and southwards, and very rarely found off the limestone. The north-eastern records have never been verified.

Gentiana campestris L.

Census 29—East 11, Centre 7, West 11.

1 Kerry S. Caragh Lake '90: rare—Scully.

2	Kerry N.	Rahaneen '96 : rather rare and local—Scully.
3	Cork W.	Bantry '98 : frequent—Phillips.
4	Cork Mid	Crosshaven '00 : rare—Phillips.
5	Cork E.	Dunbullogue (D. Murray)—Power *Fl.* '45.
6	Waterfd.	West of Bunmahon '82—Hart *384*.
8	Limrck.	Mullagh '00—P.
9	Clare	Inishmore '69—Hart *365*. Burren common—Foot *324*.
10	Tipp. N.	Cloughjordan '00—P.
12	Wexford	Courtown '94—P. *726*. Frequent in N., ? rare in S.
15	Galw. SE.	Knockaun Grania '80—Mrs. Joyce ! Kittarton—*104*.
16	Galw. W.	Roundstone '96—P. Frequent throughout.
17	Galw. NE.	Oranmore and Menlo '99—P.
18	King's	Clara '99—P.
20	Wicklow	Brittas Bay '96—P. ? Frequent.
21	Dublin	Ireland's Eye '97—P. Rare—Colgan.
22	Meath	Boyne mouth '96—P.
23	Westmth.	Glynnwood House '99—P.
24	Longfd.	Collum Point and Saint's Island on L. Ree '00—P.
26	Mayo E.	Callow and Carrowkeribly L. '00—P. Ballinrobe.
27	Mayo W.	Newport '99—Colgan. Pontoon—P. Westport—*522*.
28	Sligo	L. Talt '96—Colgan. Knocknarea : c. in NE. '97—P.
31	Louth	Ballymascanlan '00—P.
33	Ferman.	Legland Mountain '81—Stewart *854*.
34	Dongl. E.	Malin Head '98—Hart *405*. Throughout f.—*Fl. Don.*
35	Dongl. W.	Burton Port, &c. : throughout frequent—*Fl. Don.*
38	Down	Ballykinler '00—Waddell. Frequent—*Fl. NE.*
39	Antrim	Skerry '94—B.N.F.C. *126*. F. throughout—*Fl. NE.*
40	L'derry	Magilligan '95—P. Frequent—*Fl. NE.*

A widely distributed plant, more common off than on the limestone.

Menyanthes trifoliata L. Bog-bean.

Divisions all. Common.

Cynoglossum officinale L. Hound's-tongue.

Census 14—East 12, Centre 2, West 0.

4	Cork Mid	Rochestown '93 (Miss Martin)—Phillips. Douglas.
5	Cork E.	Near Youghal—Allin *Fl.* '83. Rare.
6	Waterfd.	Tramore ! '99—Phillips.
7	Tipp. S.	Ardfinnan, and NW. of Cahir '00—P.
11	Kilkny.	Lismaine House, Jenkinson House '99—P. Kilkenny.

12 Wexford Carnsore '97—Marshall. Very frequent on the coast.
13 Carlow Goresbridge '99, Leighlinbridge—P. Bagenalstown.
14 Queen's Timahoe '97—P.
19 Kildare Moone, I. Carroll—*Cyb.* I.
20 Wicklow Brittas Bay '96—P. Common on the Murrough.
21 Dublin Portmarnock '00 : local—Colgan.
22 Meath Boyne mouth '96 : frequent on the coast—P.
31 Louth Killencoole '96, and very frequent on the coast—P.
38 Down Tyrella '00—P. Very frequent on the coast.

East coast from Cork to Donaghadee, and on dry banks inland in the south-east, Dublin, and Louth.

‡Symphytum officinale L. Comfrey.

Divisions all, *except 16 Galway West.* Quite naturalized, but has little claim to be considered native. In many cases clearly an outcast from cultivation. Rarer in the west, as is the case with most plants of cultivation.

***Anchusa sempervirens** L. Alkanet.

Census 10+(1)—East 6+(1), Centre 1, West 3.

(5 Cork E. *Glanmire, Mayfield—Allin *Fl.* R., not established.)
19 Kildare Leixlip '88, J. S. Gamble—*Cyb.* II.
21 Dublin *Near Dunsink '94—P.
28 Sligo ‡Rosses Point '00—West.
34 Dongl. E. *Fahan, Bogay—*Fl. Don.* Churchtown—*Cyb.* II.
35 Dongl. W. *Fanet and Glenalla—*Fl. Don.*
36 Tyrone Bessy Bell '96—Miss Knowles.
37 Armagh *Tanderagee—*Fl. Ulst.* '64.
38 Down Greyabbey '95—*128.* Naturalized, f.—*Fl. NE.*
39 Antrim Clinty '99—Miss Knowles. Naturalized, f.—*Fl. NE.*
40 L'derry Limavady, &c., D. Moore : naturalized, f.—*Fl. NE.*

Naturalized in the north-east, but clearly of garden origin everywhere. Merely casual in Cork (Phillips).

Lycopsis arvensis L. Bugloss.

Census 14—East 9, Centre 2, West 3.

7 Tipp. S. Ardfinnan—Miss S. Grubb '00.
11 Kilkny. Three Castles, P. Duffy—*Cyb.* I.
12 Wexford Rosslare '97—Marshall. South coast common.
20 Wicklow Murrough, D. Moore—*Cyb.* I.

21 Dublin Rush '00 ; local—Colgan.
22 Meath Laytown '96 : coast frequent—P.
28 Sligo Strandhill '97—P. Mullaghmore, Adm. Jones—*Cyb.* I.
31 Louth Dundalk '00 : coast frequent—P.
34 Dongl. E. ‡Culdaff '98—Hart *405*. Inishowen only—*Fl. Don.*
35 Dongl. W. ‡Fanet, Rossgull, and near Ardara—*Fl. Don.*
36 Tyrone ‡Strabane '96—Miss Knowles.
38 Down Tyrella '00—P. Common on coast—*Fl. NE.*
39 Antrim Ballycastle '97—P. Common on coast—*Fl. NE.*
40 L'derry Magilligan '97—Mrs. Leebody. Coast c.—*Fl. NE.*

Chiefly on the east coast, where it is locally abundant. Perhaps introduced in its few inland stations. An unconfirmed casual in Cork.

Mertensia maritima S. F. Gray. Sea Gromwell; Oyster-plant.

Census 7+(1)—East 5+(1), Centre 0, West 2.

20 Wicklow Near Kilcoole '80, Hart—*Cyb.* II. Murrough, now v. r.
(21 Dublin Between Balbriggan and Skerries—*Fl. Hib.* ? Extinct.)
31 Louth Dundalk Bay sparingly '90—Butler *185*.
34 Dongl. E. Near Malin Hd. '98—Hart *405*. Dunaff Hd.—*Fl. Don.*
35 Dongl. W. Rossgull—*Fl. Don.*
38 Down Near Newcastle '99—West. South, v. r.—*Fl. NE.*
39 Antrim Garron Head, D. Moore—*Cyb.* I. Island-magee 1794.
40 L'derry West of Portstewart '93—Mrs. Leebody. Castlerock.

East and north coasts, from Wicklow Head to Sheep Haven, decreasing.

Myosotis cæspitosa F. Schultz. Scorpion-grass (genus).

Divisions all. Common.

Myosotis palustris With. Forget-me-not.

Divisions all. Frequent. Lowland.

Myosotis repens G. Don.

Census 34—East 15, Centre 9, West 10.

1 Kerry S. Kenmare '99 : frequent—Scully.
2 Kerry N. Abbeydorney '99 : frequent—Scully.
3 Cork W. Dunmanway '00 : frequent—Phillips.

4	Cork Mid	Ring '00 (Scully): frequent—Phillips.
5	Cork E.	Dodge's glen '98: frequent—Phillips.
6	Waterfd.	Ballyscanlan Lough '99—P.
7	Tipp. S.	Slievenaman '00—P. Frequent in SW.
9	Clare	Woodcock Hill '97—W. Fogerty! Lisdoonvarna.
10	Tipp. N.	Base of Keeper '99, Devil's Bit '98—P.
11	Kilkny.	Barleeagh Wood '98—P.
12	Wexford	Wexford '97—Marshall. Ballyhyland, Killanne—*552*.
13	Carlow	Near Gowlin '99—P.
16	Galw. W.	Inveran '95—Colgan. And locally in the north-west.
19	Kildare	West of Baltinglas '99—P.
20	Wicklow	Avondale, Shillelagh, '99—P. Frequent.
21	Dublin	Kilmashogue '94: local—Colgan.
22	Meath	Slieve Bregh '00—P.
24	Longfd.	Lough Gowna '00, Carn Clonhugh '98—P.
25	Roscomn.	Boyle and Lough Arrow '97—P.
26	Mayo E.	Glendaduff '00—P.
27	Mayo W.	Nephin '00—P. Common.
28	Sligo	Lough Gill '99, Lough Arrow '97—P.
29	Leitrim	L. Gill '99—P. L. Allen, Slievanieran—Stewart *859*.
30	Cavan	Slieve Glah '96, Scrabby—P. Slievenakilla—*859*.
31	Louth	Collon, Ravensdale, Carlingford, '00—P.
32	Monaghn.	Creeve Lough '00—P. Locally frequent.
33	Ferman.	South of Belleek '00—P.
34	Dongl. E.	Brown Hall '00—P. Throughout, ?frequent—*Fl. Don.*
35	Dongl. W.	Throughout, ? frequent—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles. Sperrin mtns. c. '92—P.
37	Armagh	Common in the south '92—P.
38	Down	Crossgar '90—P. Rare: common in the Mournes.
39	Antrim	Fair Head '97—P. Frequent—*Fl. NE.*
40	L'derry	Upperlands '94—P. Common in the west—*Fl. NE.*

Replaces the last species in hilly or mountainous ground. Rare in the plain. Almost every station is off the limestone.

Myosotis arvensis Lamk.

Divisions all. Common.

Myosotis collina Hoffm.

Census 12—East 9, Centre 1, West 2.

6	Waterfd.	Tramore '99—Phillips.

12	Wexford	Rosslare '97—Marshall. Coast common.
13	Carlow	Tullow '99, Bagenalstown '97—P.
17	Galw. NE.	Knockmae '99—P.
20	Wicklow	Arklow Head '81—Hart *371*. Murrough c.—*Cyb.* I.
21	Dublin	Portmarnock '00: local—Colgan.
22	Meath	Boyne obelisk '96—P. Laytown, Barrington—*Cyb.* II.
26	Mayo E.	Ballinrobe '91—Mrs. Persse!
35	Dongl. W.	Rosapenna '93, Falcarragh—*Fl. Don.*
38	Down	Kirkiston and Newcastle '94—Waddell.
39	Antrim	L. Neagh at Six-mile R. '91—P. N. coast rare—*Fl. NE.*
40	L'derry	Portstewart '90 (Miss Davies)—Stewart *862*.

Up the east coast from Waterford to Donegal. Inland on old walls in Carlow and Meath, on bare limestone in Galway and Mayo, and gravelly lake-shore in Antrim.

Myosotis versicolor Reichb.

Divisions all, *except 14 Queen's Co. and 23 Westmeath*, in which no doubt it will be found. Frequent.

Lithospermum officinale L. Gromwell.

Census 30—East 13, Centre 8, West 9.

3	Cork W.	Near Macroom '00 (W. H. Shaw)—Phillips.
4	Cork Mid	Dunscombe's wood, J. Sullivan—*Cyb.* II. Rare.
5	Cork E.	Ballygannon—Allin *Fl.* '83. Rare.
6	Waterfd.	Blenheim—B. & G. '89 *100*. Lismore '82—*Cyb.* II.
7	Tipp. S.	Fethard '97—P.
8	Limerick	Mullagh '99, O'Brien—*Hb.* L.F.C!
9	Clare	Fanore '00—Miss Knowles. Inishmore; Ballyvaughan.
11	Kilkny.	Kilkenny, Thomastown, '00—Phillips. Sion; Kilmacow.
12	Wexford	North of Courtown '97—P. Not unfrequent—*Cyb.* II.
14	Queen's	Maryboro'! '00—Phillips. Mountrath; Rathdowney.
15	Galw. SE.	St. Clerans '99—P. Gort; Portumna; Castle Taylor.
16	Galw. W.	Bunowen, I. Carroll—*Cyb.* I.
17	Galw. NE.	North of Menlo '99—P.
18	King's	Philipstown '96—P.
19	Kildare	Levitstown '99—P. Near Straffan, J. Douglas—*Cyb.* I.
20	Wicklow	Rathnew '96—P. Fassaroe (Barrington)—More *614*.
21	Dublin	Near Malahide '00: local—Colgan.
22	Meath	Kells '00—P. Local, and chiefly in the east.
23	Westmth.	Edmonton (Miss E. Reynell)—Levinge '94 *484*.

24 Longfd. North of Ballymahon '00—P.
27 Mayo W. Frequent round Lough Conn, and at Ballina, '00—P.
28 Sligo Near Collooney '99—W. de V. Kane.
31 Louth Queensborough and Boyne obelisk '96—P.
32 Monaghn. Drumreaske '96—W. de V. Kane! Raconnell—*Cyb.* I.
34 Dongl. E. About Ballyshannon—*Fl. Don.*
35 Dongl. W. Rathmullan, Carrigart—*Fl. Don.* Ballyhooriskey—*614.*
36 Tyrone Cookstown '81—Stewart.
37 Armagh Loughgall '92—P. Killeavy—Lett! Armagh.
39 Antrim Cave Hill! '85—Stewart. Rare, and in south only.
40 L'derry Near Cookstown, W. McMillan: rare—*Fl. NE.*

Thinly but evenly distributed over the country, being rare in all divisions, and yet probably absent from very few.

Lithospermum arvense L.

Census 17—East 11, Centre 4, West 2.

3 Cork W. Roscarbery (Miss Hungerford), Shepperton—Allin *Fl.*
4 Cork Mid Ballinlough—Power *Fl.* '45. Rare.
5 Cork E. Killawillin '84—Hart *388.* Fermoy—*Cyb.* II.
6 Waterfd. Near Youghal '84—Hart *388.*
11 Kilkny. Kilkenny '00—Phillips.
12 Wexford ‡Aughnaclappa '89—Moffat *552.*
13 Carlow Between Carlow and Mageney '84—Hart *383.*
15 Galw. SE. Castle Taylor, More—*Cyb.* I.
21 Dublin Whitehall, Miss A. G. Kinahan—*Cyb.* II.
22 Meath Below Drogheda, Barrington—*Cyb.* II.
23 Westmth. North of Athlone '98—P.
24 Longfd. L. Slawen, Clawinch, Black Is., '85-6—B. & V. *113.*
25 Roscomn. Near Athlone '98, by R. Suck west of Glenmore—P.
32 Monaghn. Drumreaske '00—Waddell.
37 Armagh Tartaraghan '54—More *600.*
38 Down Near Bangor, Stewart: very rare—*Fl. NE.*
39 Antrim Carrickfergus, Millen—*Fl. Ulst.* '64. V. r.—*Fl. NE.*

Rare and local, and mostly in cultivated land, where it may have been introduced.

Echium vulgare L. Viper's Bugloss.

Census 16+(1)—East 11+(1), Centre 3, West 2.

3 Cork W. Cape Clear Island '96: rare—Phillips.

4	Cork Mid	Ballincollig (Sullivan)—Allin *Fl.* '83. Rare.
5	Cork E.	†Midleton '00 : rare—Phillips.
6	Waterfd.	Opposite Youghal '82—Hart *384*.
7	Tipp. S.	Cahir on old walls '00—Phillips. Rahill—*Cyb.* I.
8	Limrck.	Rathkeale '97, Foynes on railway—R. D. O'Brien.
11	Kilkny.	Thomastown, walls, '00—Phillips. New Ross—*383*.
12	Wexford	Near Bree Hill '89—B. & G. *101*. Frequent throughout.
14	Queen's	†Maryborough '96—P.
15	Galw. SE.	Sand-pit near Craughwell '99—Mrs. Joyce!
20	Wicklow	Common about Wicklow, Vowell—*Cyb.* II.
21	Dublin	Portrane '00 : rare—Colgan.
22	Meath	Gormanstown : frequent on coast, '96—P.
31	Louth	Greenore '00, and local on southern shores—P.
38	Down	Tyrella '00—P. Shores, &c., of southern half—*Fl. NE.*
39	Antrim	Larne, Stewart : very rare as a native—*Fl. NE.*
(40	L'derry	Moneymore, W. T. Whan—*Fl. Ulst.* '64. ? casual.)

Native on the east coast from Waterford to Strangford Lough or perhaps Larne. Inland, it appears to be indigenous in Wexford, but none of the other stations are altogether satisfactory. Undoubtedly casual occurrences are frequent—for instance, in 8, 11, 14, 19, 20, 34, 38, 39.

Calystegia sepium R. Br. Great Bindweed.

Divisions all. Common.

Calystegia Soldanella R. Br. Sea Bindweed.

Census 14+(1)—East 9, Centre 0, West 5+(1).

1	Kerry S.	Derrynane '00 : local—Scully.
2	Kerry S.	Banna '92 : very local—Scully.
3	Cork W.	Lough Hyne and Mizen Head '96 : rare—Phillips.
5	Cork E.	Youghal '00— Phillips. Ballycotton—Drummond *287*.
6	Waterfd.	Tramore! '99—Phillips.
9	Clare	Murrough, Westropp—*Cyb.* II. Aran—Hart *365*.
12	Wexford	Courtown '97—Marshall. South coast, frequent.
20	Wicklow	Arklow '94—P. Common on the Murrough.
21	Dublin	North Bull '00 : very rare—Colgan.
22	Meath	Boyne mouth '96—P.
31	Louth	Near Clogher Head '96— P.
(34	Dongl. E.	Ballyshannon, Allingham : ?—*Fl. Don.*)

35 Dongl. W. Near Horn Head—*Fl. Don.* Glencolumbkille—*Fl. Ulst.*
38 Down Ballykinler! '86—Stewart. Very rare, S. only—*Fl. NE.*
39 Antrim Bushfoot '97—Mrs. Swan. Very rare—*Fl. NE.*

Absent from a great part of the west coast.

Convolvulus arvensis L.

Census 36—East 15, Centre 11, West 10.

1 Kerry S. Kenmare '99 : rather frequent—Scully.
2 Kerry N. †Killarney '98 : rare—Scully.
3 Cork W. Macroom '00 : frequent—Phillips.
4 Cork Mid Blarney '98 : common—Phillips.
5 Cork E. Youghal '00 : common—Phillips.
6 Waterfd. Dungarvan '99, and in the east, not common—P.
7 Tipp. S. Cahir '00 : frequent—P.
8 Limrck. Askeaton '00—P. Frequent in the north.
9 Clare Quin '79—Corry *240*. Inishmore '69—Hart *365*.
10 Tipp. N. Roscrea '00—Phillips.
11 Kilkny. Thomastown '98 : frequent from north to south—P.
12 Wexford Wexford '96—Marshall. Frequent in the south.
13 Carlow Bagenalstown '99—P. Frequent.
15 Galw. SE. Kilcolgan '99—P. About Portumna and f. in west.
16 Galw. W. Ross Lake '99—P. East only, frequent.
17 Galw. NE. Menlo, Ballyloughaun, Oranmore, '99—P.
19 Kildare Curragh '97, Kilcock '96—P. Straffan—*Cyb.* I.
20 Wicklow Wicklow '97, Newcastle, Delgany—P.
21 Dublin Greenhills '00 : frequent—Colgan.
22 Meath Bective, Enfield, Mornington, '96—P.
23 Westmth. Athlone '99—P.
24 Longfd. Newtowncashel '00—P.
25 Roscomn. Ballinasloe and frequent about Athlone '99—P.
26 Mayo E. Ballinrobe '90—Mrs. Persse! Cong; Lisloughry.
28 Sligo Ballysadare '97—P. Widespread, frequent.
30 Cavan Belturbet '99 (Allen)—West.
31 Louth Whitestown '00, Braganstown, Clogher Head—P.
32 Monaghn. Castleblayney, Rockcorry, '00—P. Newbliss—Kane.
33 Ferman. Newtownbutler '96, Colgan ; Enniskillen—*Cyb.* II.
34 Dongl. E. Leenane Hd., Ballyshannon : N. to S., local—*Fl. Don.*
35 Dongl. W. Kincashla, &c. : local, rare in west—*Fl. Don.*
36 Tyrone Omagh '96—Miss Knowles.
37 Armagh Frequent about Armagh and Newry '92—P.

38 Down Killough '92—P. Rare—*Fl. NE.*
39 Antrim Antrim '99—Miss Knowles. S. only, rare—*Fl. NE.*
40 L'derry Bellarena '98—Mrs. Leebody. Rare—*Fl. NE.*

Evenly distributed, and usually found where light soils occur. Spreading along the railways in parts of the country. Many stations are open to suspicion, but it is impossible to separate them from those in which the plant is indigenous.

‡Cuscuta Epithymum Murr. Dodder (genus).

2 Kerry N. Banna '87—Scully.
6 Waterfd. Dungarvan '99—P. Near Tramore '92, Grubb—*Cyb.* II.
35 Dongl. W. Rosapenna '96—Hart *401*.

Apparently established at Dungarvan, where it has been known for fifteen years.

‡*Cuscuta Trifolii* Bab.

Census 7+(2)—East 4+(2), Centre 1, West 2.

(5 Cork E. Near Midleton—Allin *Fl.* '83. Casual—Phillips.)
8 Limrck. Curragh Chase '00—Miss Bennis!
9 Clare Inishmore '95—P.
12 Wexford Ferns '96—G. E. J. Greene! Aughnaclappa; Alderton.
(19 Kildare Kilkea, once found (J. Douglas)—More '72 *614*.)
20 Wicklow Ballyarthur '89, R. Bayly—*Cyb.* II. Fassaroe—*614*.
21 Dublin Portrane '94: very rare—Colgan.
28 Sligo Mullaghmore '00—P.
31 Louth Baltray and Lurgan Green '96—P. Castlebellingham '90—Butler *185*.

Appears established in sandy ground by the sea in Clare, Sligo, Dublin, and Louth. Most of the other stations being in cultivated land, the plant will probably have little chance of effecting a permanent lodgment.

Solanum Dulcamara L. Bitter-sweet.

Census 34—East 15, Centre 10, West 9.

1 Kerry S. Waterville '00: var. *marinum* f., type *v. r.—Scully.
2 Kerry N. Barrow Harbour '92: *marinum* r., type ‡v. r.—Scully.
4 Cork Mid Cork '98, Blarney '96: rare—Phillips.
5 Cork E. Castletownroche '00: rare—Phillips.
6 Waterfd. Cappoquin '99—P.

7	Tipp. S.	Fethard '97—P. Holycross '82—Hart *385*.
8	Limrck.	Adare '97, G. Fogerty—*Hb.* L.F.C.!
9	Clare	Cahircon '99—G. Fogerty! Widespread, ?rare.
11	Kilkny.	Near Lismaine House '99—P. Frequent, chiefly in S.
12	Wexford	Courtown '96—P. Edermine—*371*. Enniscorthy.
13	Carlow	Borris '99, Graiguenamanagh '98—P.
14	Queen's	Grattan aqueduct '97—P.
15	Galw. SE.	Garryland '00—P.
16	Galw. W.	Salthill '99—Mrs. Joyce! Clonbur; Renvyle.
17	Galw. NE.	Donamon '97—P. Menlo, *Hb.* J. Reilly—*Cyb.* II.
18	King's	Barrow below Portarlington '84—Hart *383*.
19	Kildare	Kilcock '96—P. Straffan, J. Douglas—*Cyb.* I.
20	Wicklow	Killoughter '97—P.
21	Dublin	Around Lusk '00: common—Colgan.
22	Meath	Frequent about Bective '00—P.
24	Longfd.	Near Woodlawn '98—P.
25	Roscomn.	Rockville '99, Lough Key, Mount Talbot—P.
26	Mayo E.	Lough Mask shores and islands—W. de V. Kane.
29	Leitrim	In Co. Leitrim rare, J. Wynne—*Cyb.* I.
31	Louth	River at Kerney's cross '97—P.
32	Monaghn.	†Castleblayney '00—Somerville.
33	Ferman.	†Little Paris Island '92—P. *691*. Rare.
34	Dongl. E.	†Near Donegal, Ballybegley, &c.: N. and S., r.—*Fl. Don.*
35	Dongl. W.	†Near Donegal—*Fl. Don.*
36	Tyrone	Strabane and Omagh '96—Miss Knowles.
37	Armagh	Armagh '94—W. F. Johnson! Lurgan lake—H. W. Lett!
38	Down	Comber '93, Stewart—*Hb.* S. & A.M.! Rare—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Dungiven '94—Mrs. Leebody. Rare—*Fl. NE.*

Seems native in the east; by the larger rivers, &c., in the centre; and on seashores (var. *marinum*) and elsewhere in the west. In the stations to which my name is appended there was no evidence of introduction. It is frequently grown about cottages.

***Solanum nigrum** L. Black Nightshade.

Census 12+(4)—East 4+(4), Centre 3, West 5.

1	Kerry S.	‡Dromore '90—Scully.
2	Kerry N.	*Fenit '94—Scully.
3	Cork W.	*Timoleague abbey—Drummond '19 *287*.
5	Cork E.	Rossmore '00—Phillips. Brown Island; Eastferry.

6 Waterfd. Clonmel '00—Phillips. Cappoquin—More *MS.*
12 Wexford *Enniscorthy '98—P. Occasionally on south coast.
16 Galw. W. Salthill '00—Phillips.
17 Galw. NE. Rinmore! '00—Phillips. Ballyloughaun '99—P.
18 King's Edenderry '54, T. Chandlee—*Cyb.* I.
(19 Kildare Kilkea once seen (J. Douglas)—More '72 *614*).
20 Wicklow Ovoca '82, near Wicklow '73—*Cyb.* II.
(21 Dublin Easton Lodge '73–4 very abundant, G. Pim—*Cyb.* II.)
23 Westmth Knock Drin, in garden ground—Levinge '94 *484*.
26 Mayo E. Lough Mask near Ballinrobe '91—Mrs. Persse!
(38 Down Copeland Is. and mainland, Campbell—*Fl. Hib.* '36).
(39 Antrim Greenisland '00, Glenarm, Cushendun—casual only.)

Is perhaps established on the Wexford (where it has grown for nearly seventy years) and Galway coasts. Most of the other records refer to casual and temporary appearances.

***Lycium barbarum** L. Tea Plant.

3 Cork W. Baltimore '96—Phillips.
6 Waterfd. Bunmahon '99—P.
12 Wexford Rosslare established '82—Hart *384*.
21 Dublin Well established at Howth—*Fl. Howth.*
34 Dongl. E. Buncrana and Bundoran established—*Fl. Don.*

Becoming naturalized on sandy shores in these and perhaps other localities.

Hyoscyamus niger L. Henbane.

Census 30—East 15, Centre 7, West 8.

1 Kerry S. Magheree Islands '90—Scully. Kilshannig—Hart *381*.
2 Kerry N. Fenit '92—Scully.
3 Cork W. Clonakilty '96, Mrs. Wolfe—*Cyb.* II. Rare—Phillips.
4 Cork Mid ‡Marina at Cork '92—Phillips. Carrigrohane—*287*.
5 Cork E. Ballyvodock '00: rare—Phillips.
6 Waterfd. Ballyvoyle Head '99—P. Dungarvan—*Cyb.* I.
8 Limrck. Lough Gur '94, Mrs. R. Gibson—L.F.C. *491*.
9 Clare Kilrush River, O'Kelly—*Cyb.* II.
10 Tipp. N. Holycross, S. Madden—*Cyb.* I.
11 Kilkny. Kilkenny '97—Mrs. Persse. River View; Kilmanagh.
12 Wexford Wexford '96—Marshall. South coast f.—Hart *384*.
13 Carlow Browne's Hill, R. C. Browne—*Cyb.* I.
14 Queen's †Dunmore '98—P. Maryborough (Morrison)—More *614*.
16 Galw. W. Shore at Galway '99—P.

17	Galw. NE.	Rinmore'00—Phillips. Ballyloughaun, †Oranmore—P.
18	King's	Esker at Edenderry '96—P. Rahan; Parsonstown.
19	Kildare	Straffan, J. Douglas—*Cyb.* I.
20	Wicklow	Near Newcastle '91, D. M'Ardle—*Hb.* Glasnevin.
21	Dublin	Howth '00 : rare—Colgan.
22	Meath	Kilmessan '97, Mayden Tower '94—P.
24	Longfd.	‡Newtowncashel '00—P.
26	Mayo E.	Ballinrobe '00—Mrs. Persse!
28	Sligo	The Point, S. Madden—*Cyb.* I.
31	Louth	Bellurgan '00—Mrs. Swan! C.bellingham—Butler *185*.
34	Dongl. E.	Greencastle, one plant, W. E. Hart—*Fl. Don.*
36	Tyrone	L. Neagh '96—Miss Knowles. C. at Arboe—*Fl. NE.*
37	Armagh	Armagh, W. Thompson—*Fl. Ulst.* '64.
38	Down	Killard Point, Corry : rare—*Fl. NE.*
39	Antrim	Ballycastle '97—P. Rare—*Fl. NE.*
40	L'derry	Magilligan, D. Moore—*Cyb.* I. Rare—*Fl. NE.*

In 12, 17, 18, 21, 36 at least, it appears to be established. This is a plant of very uncertain appearance in many of its stations, often disappearing and reappearing quite irregularly.

Verbascum Thapsus L. Mullein.

Census 32—East 14, Centre 10, West 8.

1	Kerry S.	Waterville '00 : rather rare—Scully.
2	Kerry N.	Ardfert '99 : rather rare—Scully.
3	Cork W.	Macroom '00 : frequent—Phillips.
4	Cork Mid	Carrigaline '00 (Scully) : frequent—Phillips.
5	Cork E.	Whitegate '00 : common—Phillips.
6	Waterfd.	Bunmahon '99—P. Opposite Youghal '82—Hart *384*.
7	Tipp. S.	Cahir '00—P. Very frequent, chiefly in the south.
8	Limrck.	Lough Gur '00—P. Frequent in the north.
9	Clare	Dromoland '98—W. de V. Kane. Common in the north.
10	Tipp. N.	Roscrea '00—Phillips.
11	Kilkny.	Thomastown '98 : frequent—P.
12	Wexford	†Enniscorthy '98—P. Rare.
13	Carlow	Leighlinbridge '98 : rather common—P.
14	Queen's	Stradbally and †Mountrath '97—P.
15	Galw. SE.	Shore N. of Kinvarra '99 : frequent, chiefly in W.—P.
17	Galw. NE.	Annaghdown '00—P. Not rare.
18	King's	Near Frankford '00, Edenderry '96—P.
20	Wicklow	†Near Glen of the Downs '93—P.

21 Dublin Ireland's Eye '94—P. Very rare—Colgan.
22 Meath Beauparc '00, Laytown '96—P.
23 Westmth. Esker N. of Moate '99—P. ‡Knockdrin—Levinge *484*.
24 Longfd. Elfeet Bay and north of Ballymahon '00—P.
25 Roscomn. Ballinasloe '99, Athlone—P. Yew Point—B. & V. *113*.
26 Mayo E. Clonbur '95 and '96—Marshall.
27 Mayo W. Moyne abbey, Dickie—*Fl. Ulst.* '64.
31 Louth Greenore '78—Stewart.
34 Dongl. E. *Near Fahan and towards Derry—*Fl. Don.*
36 Tyrone Omagh '96—Miss Knowles.
37 Armagh *Near Armagh '92—P.
38 Down ‡Downpatrick '00—P. Rare and often sporadic—*Fl. NE.*
39 Antrim Rathlin established '92—P. Rare, often sporadic.
40 L'derry Dungiven '94—Mrs. Leebody. Rare, often sporadic.

A calcicole plant, and almost all the more satisfactory stations lie in the Central Plain. My own records given above, in which the plant is treated as indigenous, are from limestone rocks, esker-ridges, and lake- and sea-shores, where the plant has often all the appearance of a native. But it is frequently grown in cottage gardens, from which it escapes.

***Linaria Cymbalaria** Mill. Ivy-leaved Toadflax.

Divisions all, *except 24 Longford.* Generally abundant, but rather local, and rare in some of the western divisions.

‡Linaria Elatine Mill. Fluellin.

Census 8—East 4, Centre 1, West 3.

3 Cork W. Schull, Skibbereen, Cape Clear, '96 : f. in S.—Phillips.
4 Cork Mid Crosshaven '00 : rare—Phillips.
5 Cork E. Whitegate and Power Head '98 : rare—Phillips.
6 Waterfd. Tramore '99—P.
8 Limrck. Rathkeale (H. Hardy)—Mackay '25 *522*.
9 Clare Ballyvaughan '95, O'Kelly—*Cyb.* II. Burren only, r.
12 Wexford Ballycarney '91, Greene—*Cyb.* II. South, rare.
15 Galw. W. S. of Kinvarra '00—P. Castle Taylor '85—Mrs. Joyce !

Southern half of Ireland, chiefly on the coasts.

Linaria repens Mill.

Census 5—East 3, Centre 0, West 2.

3 Cork W. Bandon '91, Desert '89 ; rare—Phillips.
4 Cork Mid Between Bandon and Innishannon '91—Phillips.

35 Dongl. W. †Near Ramelton, Dean Gwynn—*Fl. Don.*
37 Armagh Canal locks below Newry '92—P.
38 Down Killowen to Seafield abundant '97—P.

The Carlow and Dublin records are doubtful.

†Linaria vulgaris Mill. Yellow Toadflax.

Census 25—East 12, Centre 7, West 6.

2 Kerry N. ‡Killarney '94—Scully.
3 Cork W. Ballineen and Schull '96: rare—Phillips.
4 Cork Mid. Blackrock '99: Cork f.—Phillips. Bandon—Allin *Fl.*
5 Cork E. Midleton and Tivoli '00: frequent near Cork—Phillips.
6 Waterfd. South of Lismore '96, F. E. Currey—*Cyb.* II.
8 Limrck. Railway at Adare '00, O'Brien—*Hb.* L.F.C.!
12 Wexford Enniscorthy '98—P. Frequent in N., rare in S.
13 Carlow Carlow '00—Phillips. Frequent.
15 Galw. SE. Gort '00—Phillips.
16 Galw. W. West of Galway, Melville—*Cyb.* I.
18 King's Esker at Clara '99—P.
20 Wicklow Rathnew '00, Shillelagh '99—P. Murrough—*Cyb.* I
21 Dublin †Knockmaroon '93—Colgan.
23 Westmth. Near L. Sheelin (Miss E. Reynell)—Levinge '94 *484.*
24 Longfd. Lough Gowna '00—P.
30 Cavan Scrabby '00, Drumhawnagh '96—P.
31 Louth Dundalk '00—Mrs. Swan.
32 Monaghan Iniskeen '00—P.
34 Dongl. E. †Bridge End (J. Hunter)—Hart '99 *405.*
35 Dongl. W. *Lough Thorn and Burton Port—*Fl. Don.*
36 Tyrone Omagh '96—Miss Knowles.
37 Armagh Frequent throughout '92—P.
38 Down Downpatrick '00: frequent—P.
39 Antrim Galgorm '00—Miss Knowles. Frequent—P.
40 L'derry Magilligan '95—P. Rare—*Fl. NE.*

Calcifuge, and hardly appears except as an escape till the limestone is left, when in the south-east and north it becomes frequent, and in the north-east is possibly native. Very rare in the west.

***Linaria minor** Desf.

Census 27+(1)—East 10+(1), Centre 10, West 7.

1 Kerry S. Near Castlemaine '99: local—Scully.
3 Cork W. Near Millstreet '00—Phillips.
4 Cork Mid. Sunday's Well, a weed in gardens—Carroll '54 *192.*

5	Cork E.	Midleton gravel-pit '00: f. on railways—Phillips.
6	Waterfd.	Lismore '70, F. E. Currey—*Cyb.* II.
7	Tipp. S.	Fields at Knocklofty '00: railways frequent—P.
8	Limrck.	Kilmallock '00—Phillips. Railways in north, common.
9	Clare	Longpavement '00, O'Brien—*Hb.* L.F.C.!
10	Tipp. N.	Roadside at Ballingarry '00, and f. on railways—P.
11	Kilkny.	Among barley at Thomastown: railways common—P.
(12	Wexford	Railway near Enniscorthy once, J. Morrison—*Cyb.* I.)
13	Carlow	Railways c. '98–9—P. Waste ground, Carlow—*192.*
14	Queen's	Potato fields at Emo '96—P. Abundant on railways.
15	Galw. SE.	Roadside at L. Cooter '00—P. Common on railways.
17	Galw. NE.	Railway from Ballinasloe to Galway common—P.
18	King's	Boggy ground at Shannon Harbour '98: railways f.—P.
19	Kildare	Tilled ground at Nurney '97: common on railways—P.
20	Wicklow	Baltinglass '00, and frequent on Wexford railway—P.
21	Dublin	Howth, garden weed—*Fl. Howth.* Common on all railways except Great Northern—P.
22	Meath	Carbury, tilled ground, '96; M.G.W.R. system c.—P.
23	Westmth.	Mullingar '99: railways very common—P.
24	Longfd.	Longford '00: railways common—P.
25	Roscomn.	Drumsna '99: railways frequent—P.
26	Mayo E.	Claremorris '00—P.
27	Mayo W.	Ballina '00—P.
28	Sligo	Ballysadare '00—P.
30	Cavan	Drumhawnagh '00—P.
31	Louth	Greenore '00—P.

A remarkable colonist, first observed near Cork about 1819, and in Carlow and Dublin thirty or forty years later. Now spread along railways over the whole south and west (M.G.W., G.S. & W., and D.W. & W. systems), but as yet absent from the Great Northern system and its connections, excepting an isolated station at Greenore. Much rarer in cultivated or waste land, and by roadsides. Excepting the Lismore record (of which I have no knowledge) every station where the plant did *not* occur on a railway line is expressly stated in the above list.

†**Antirrhinum Orontium** L. Lesser Snapdragon.

3	Cork W.	Baltimore '96, Lough Hyne '89: f. in south—Phillips.
4	Cork Mid.	Coachford '97, Inniscarra '92: rare—Phillips.
5	Cork E.	Carrigtwohill '00, Great Island '92: rare—Phillips.

Naturalized in Cork. An occasional casual elsewhere.

Scrophularia aquatica L. Water Figwort.

Census 37—East 15, Centre 10, West 12.

1	Kerry S.	Derrynane '00: rare and local—Scully.
2	Kerry N.	Listowel '94: frequent in north, rare elsewhere—Scully.
3	Cork W.	Dunmanway '00: frequent—Phillips.
4	Cork Mid	Carrigaline '00 (Scully): frequent—Phillips.
5	Cork E.	Castletownroche '00: frequent—Phillips.
6	Waterfd.	Clonea '99—P. Common.
7	Tipp. S.	Fethard '97—P. Common along the Suir.
8	Limrck.	Askeaton '00—P. Frequent in the north.
9	Clare	Meelick '97—Bentley! Ennis, Kilrush—Stewart *863*.
10	Tipp. N.	Toomavara '00—P. Frequent.
11	Kilkny.	L. Cullin '99—P. Local: frequent in south.
12	Wexford	Enniscorthy '98—P. Frequent.
13	Carlow	Tullow '98, and frequent in the south—P.
14	Queen's	Durrow '00—Phillips.
15	Galw. SE.	Loughrea '00—P. Throughout, rather frequent.
16	Galw. W.	Clifden '98—Colgan. Frequent.
17	Galw. NE.	Barbersfort and common about Galway '99—P.
18	King's	South of Clara '99—P.
19	Kildare	Kilkea '99, Robertstown '98—P.
20	Wicklow	Altadore '93, Glen of the Downs, Bray—P.
21	Dublin	Near Lusk '00: frequent—Colgan.
22	Meath	Beauparc to Navan abundant, Bective, '00—P.
23	Westmth.	Clonhugh '99—P. Clondaliever: rare—Levinge *484*.
24	Longfd.	Lough Ree below Ballymahon '00—P.
25	Roscomn.	Lough Allen '84—Stewart *859*.
26	Mayo E.	Claremorris '00—P. Ballinrobe—Mrs. Persse! Cong.
27	Mayo W.	Newport '99—Marshall. Mweelrea—*380*. F. in NE.—P.
28	Sligo	Ballysadare '00—P. Not rare.
29	Leitrim	Drumahaire '99—P.
31	Louth	Dunleer '00, Killencoole '96—P. Collon—*Ir. Fl.*
32	Monaghn.	Lough Avaghon '00—P.
34	Dongl. E.	About Burnfoot and Pettigo: very local—*Fl. Don.*
35	Dongl. W.	Horn Head, Donegal, &c.: very local—*Fl. Don.*
37	Armagh	Lurgan demesne '00—Davies.
38	Down	Castlewellan Lake '91—Stewart. Very rare—*Fl. NE.*
39	Antrim	Crumlin and Doagh Water, Stewart—*Fl. NE.*
40	L'derry	Coleraine '94—Mrs. Leebody.

Frequent and widespread, diminishing in frequency from south to north, and rare in Ulster.

Scrophularia umbrosa Dum.

19 Kildare Above Leixlip '95—P. *803*.
21 Dublin Below Lucan '00—Colgan. Lucan demesne to Knockmaroon—Colgan *216*.

Confined, as at present known, to a few miles of the course of the Liffey.

Scrophularia nodosa L. Knotted Figwort.

Divisions all. Frequent.

***Mimulus guttatus** DC. Yellow Monkey-flower.

Census 20—East 8, Centre 5, West 7.

1 Kerry S. Sneem '90—Scully.
2 Kerry N. Killarney '92: rare and local—Scully.
3 Cork W. Bandon '97—Phillips.
4 Cork Mid Innishannon and Myrtleville, Carroll—*Cyb.* II.
6 Waterfd. Suir at Carrickbeg '00, Cappoquin abundant '99—P.
7 Tipp. S. Abundant by the Suir below Carrick '00—P.
8 Limrck. Near Limerick '99—Somerville.
9 Clare River Fergus at Ennis abundant '85–6—Stewart *863*.
11 Kilkny. Suir below Carrick '00—P.
20 Wicklow Enniskerry '00, Liffey above Blessington '99—P.
21 Dublin Frequent along the Dodder above Templeogue '00—P.
29 Leitrim Glenade, Saddle Hill, '99—P. L. Melvin—B. & V. *112*.
32 Monaghn. Castleshane '00—Waddell. Monaghan '00—Somerville.
33 Ferman. Lower L. Erne f. '00—Tetley. Ballinamallard '00—P.
34 Dongl. E. R. Foyle, Pettigoe, &c.: widespread, local—*Fl. Don.*
35 Dongl. W. Glenveagh, &c.: locally abundant—*Fl. Don.*
36 Tyrone Omagh and Strabane abundant '96—Miss Knowles.
38 Down Tollymore Park '98—Druce *285*. Clandeboye '97—P.
39 Antrim Glynn '95—P. Shane's Castle, Carrickfergus—*Fl. NE.*
40 L'derry Coleraine c. '94—P. Cookstown, Macmillan—*Fl. NE.*

Established and often abundant along streams, generally near the mountains, but sometimes in estuaries. Absent from the centre and much of the west.

Limosella aquatica L. Mudwort.

9 Clare Fisherstreet '00—Miss Richardson! Inchiquin Lough (O'Kelly)—Levinge *483*.

15 Galw. SE. Gort race-course '00—P. Tirneevin and Loughmanna, '94, O'Kelly—*Cyb.* II.

So far known only from a limited area of the western limestones. Wade's Connemara record has remained unconfirmed for a century. Mr. Pim's station (*680*) coincides with Miss Richardson's, and my own record with Mr. O'Kelly's "Newtown" (*Cyb.* II.).

Sibthorphia europæa L.

1 Kerry S. Connor Hill '94—Scully. Dingle peninsula frequent.
2 Kerry N. Slieve Mish '92—Scully.

Digitalis purpurea L. Foxglove.

Divisions all, strongly calcifuge. Generally abundant on non-calcareous rocks; occasionally on the Limestone Plain, where there is a covering of peat or humus.

Veronica hederæfolia L. Speedwell (genus).

Census 36—East 15, Centre 11, West 10.

Divisions all, *except 8 Limerick, 27 Mayo W., 28 Sligo, 32 Monaghan.* Often abundant, but rather locally distributed, and not common in the Central Plain.

Veronica agrestis L.

Census 38—East 14, Centre 13, West 11.

1 Kerry S. Kenmare '99: ? frequent—Scully.
2 Kerry N. Listowel '99: probably frequent—Scully.
3 Cork W. Gouganebarra '97, Skibbereen '96: frequent—Phillips.
4 Cork Mid Coachford '97: common—Phillips.
5 Cork E. Youghal '00: common—Phillips.
6 Waterfd. Carrickbeg '00—Phillips.
7 Tipp. S. Cahir '00: frequent—P.
8 Limrck. Lough Gur '00—P. Frequent in the north.
9 Clare Kilfenora '00—Miss Knowles. Three Isles of Aran.
10 Tipp. N. Nenagh '99—P. Frequent.
11 Kilkny. Kilkenny '98—Mrs. Persse! Widespread, probably f.
12 Wexford Fisherstown '90: frequent—B. & M. *MS.*
13 Carlow Base of Blackstairs '99, Borris, St. Mullin's—P.
14 Queen's Maryborough '96—P.
15 Galw. SE. Woodford '98, and common in the west '99—P.

16	Galw. W.	Gentian Hill '99—P. Inishbofin—More *616*.
17	Galw. NE.	Near Tuam '99 : frequent—P.
18	King's	Birr '00—Phillips.
19	Kildare	Carbury '96, above Rathmore '98—P.
20	Wicklow	Wicklow '97, Blessington '98—P.
21	Dublin	Skerries '00 : common—Colgan.
23	Westmth.	Moate '99—P.
24	Longfd.	Granard '00, and common in the west—P.
25	Roscomn.	Athlone '99—P.
26	Mayo E.	Claremorris, Foxford, '00—P. Ballinrobe—Mrs. Persse!
27	Mayo W.	Mallaranny '99—Marshall. Frequent.
29	Leitrim	Mohill '00—Somerville. Garadice Lough '00—P.
30	Cavan	L. Sheelin '96—P. Common in NW.—Stewart *854*.
31	Louth	Greenore '00, Lurgan Green, Soldier's Point—P.
32	Monaghn.	Drumreaske '00—Waddell.
33	Ferman.	Florencecourt '00—P. Common in SW.—Stewart *854*.
34	Dongl. E.	Throughout, frequent—*Fl. Don.*
35	Dongl. W.	Throughout, frequent—*Fl. Don.*
36	Tyrone	Bessy Bell '96—Miss Knowles.
37	Armagh	Near Armagh '80, W. F. Johnson!—P. *701*.
38	Down	Holywood '00—P. Common—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Common—*Fl. NE.*
40	L'derry	Magilligan '95—P. Common—*Fl. NE.*

The distribution of this and the succeeding species in Ireland is given in detail, as some doubt has existed as to their range and frequency.

Veronica polita Fr.

Census 36—East 14, Centre 10, West 12.

1	Kerry S.	Derrynane '00 : frequent—Scully.
2	Kerry N.	Killarney '00 : frequent—Scully.
3	Cork W.	Dunmanway '00 : common—Phillips.
4	Cork Mid	Coachford '97 : common—Phillips.
5	Cork E.	Youghal '00 : common—Phillips.
6	Waterfd.	Portlaw '00, Waterford '99—P.
7	Tipp. S.	Cahir '00 : common in the south—P.
8	Limrck.	Limerick '99—Somerville. Doon—P. Foynes—*863*.
9	Clare	Black Head '99—Miss Knowles. B.vaughan, Inishmore.
10	Tipp. N.	Nenagh '99—P. Frequent.
11	Kilkny.	Kilkenny '97 : widespread, probably frequent—P.
12	Wexford	Enniscorthy '98—P. Ballyhyland—B. & M. *MS.*

13	Carlow	Bagenalstown '00—Phillips. Frequent—P.
14	Queen's	Maryborough '00—Phillips. Frequent—P.
15	Galw. SE.	Marble Hill '97: common in W., rare in E.—P.
16	Galw. W.	Inveran '95—Colgan. Widespread, ? local.
17	Galw. NE.	Tuam '99: frequent—P.
18	King's	Frankford '00: frequent—P.
19	Kildare	Carbury '96—P.
20	Wicklow	Baltinglass '99, Wicklow, Greystones, Bray—P.
21	Dublin	Baldoyle '00: frequent—Colgan.
22	Meath	Bective '96: frequent throughout—P.
24	Longfd.	Granard '00: widespread, frequent—P.
25	Roscomn.	By River Suck north of Ballinasloe '96—P.
26	Mayo E.	Near Claremorris '00—P.
27	Mayo W.	Near Newport '99—Colgan. Frequent in NE. '00—P.
28	Sligo	Ballysadare '97—P. Dromore West '96—Colgan.
29	Leitrim	Manorhamilton and Lough Gill '99—P.
30	Cavan	Cavan '96—P.
34	Dongl. E.	Near Ballyshannon, casual—*Fl. Don.*
35	Dongl. W.	Glenalla and Rossnakill, casual—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles.
37	Armagh	Frequent throughout '92—P.
38	Down	Cultra '00—P. Frequent—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Castlerock '95—P. ? Frequent—*Fl. NE.*

Frequent in most parts of Ireland: apparently less so in the north.

***Veronica Tournefortii** C. Gmel. (*V. Buxbaumii* Ten.)

Divisions all. Common.

Veronica arvensis L.

Divisions all. Common.

Veronica serpyllifolia L.

Divisions all. Common.

Veronica officinalis L.

Divisions all. Common.

Veronica Chamædrys L. Germander Speedwell.

Divisions all. Common.

Veronica montana L.

Census 36—East 13, Centre 11, West 12.

1	Kerry S.	Kenmare '99: rather frequent—Scully.
2	Kerry N.	Listowel '99: rather frequent—Scully.
3	Cork W.	Millstreet '00: frequent—Phillips.
4	Cork Mid	Dunscombe's Wood '96: frequent—Phillips.
5	Cork E.	Glanmire '99: frequent—Phillips.
7	Tipp. S.	Cahir '00, Slievenaman, Fethard—P.
9	Clare	Ballycar: rare, '85-6—Stewart *863*.
10	Tipp. N.	Lough Ourna '99—P. Cloughjordan '00—Phillips.
11	Kilkny.	Kells '97, Hartley—*Cyb.* II. Kilkenny, Inistioge—P.
12	Wexford	Courtown '96—P. Near New Ross—B. & M. *102*.
13	Carlow	Aghade and Ballintemple '99—P. Borris—*Cyb.* II.
14	Queen's	Mountrath '97, Maryborough, Cullenagh—P.
15	Galw. SE.	Chevy Chase and Lough Cooter '00—P.
16	Galw. W.	Oughterard '99—P. Maam—*51*. Ballynahinch—*002*.
17	Galw. NE.	Clonbrock '96—P.
18	King's	Kinnitty '00, Clonad wood '96—P.
19	Kildare	Carton '94, Poulaphuca '00—P.
20	Wicklow	Avondale '99—P. Frequent.
21	Dublin	Woodlands '00: local—Colgan.
23	Westmth.	Knock Drin—Levinge '94 *484*. Centre and west, rare.
24	Longfd.	Moydow '98—P.
25	Roscomn.	Mote Park '97: frequent—P.
26	Mayo E.	Claremorris '00, Kilmovee '99—P.
27	Mayo W.	Derreen and Pontoon '00—P.
28	Sligo	Knocknarea and Lough Arrow '97—P.
29	Leitrim	Mohill '00—Somerville. Annaghearly L., Glenade—P.
30	Cavan	Ballyconnell '00—Somerville. Farnham '96—P.
31	Louth	North slope of Carlingford Mountain '83—Hart *381*.
33	Ferman.	Florencecourt '00—P. Frequent along the Erne.
34	Dongl. E.	Clonmany, &c. '98—Hart *405*. By the Erne—*Fl. Don.*
35	Dongl. W.	Ballymacoole '98—Hart *405*. Glenalla—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles. Rare.
37	Armagh	Loughgall, &c.: north half frequent, '92—P.
38	Down	Tollymore Park '00—P. Frequent—*Fl. NE.*
39	Antrim	Cullybackey '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Bellarena '94—Mrs. Leebody. Frequent—*Fl. NE.*

Frequent, especially in hilly country.

Veronica scutellata L.

Divisions all, *except 22 Meath.* Frequent, and probably universal.

Veronica Anagallis L.

Divisions all, *except 20 Wicklow.* Generally frequent.

Veronica Beccabunga L. Brooklime.

Divisions all. Common.

***Veronica peregrina** L.

Census 8+(1)—East 1+(1), Centre 3, West 4.

15	Galw. SE.	Roxborough '73—Hart *364*.
25	Roscomn.	Rockingham (D. Moore)—More '72 *614*.
28	Sligo	Hazelwood (D. Moore)—More '72 *614*.
32	Monaghn.	Drumreaske '00—Waddell !
34	Dongl. E.	Stranorlar '97—Mrs. Leebody. Centre, rare—*Fl. Don.*
35	Dongl. W.	Horn Head, Killybegs, &c. : local—*Fl. Don.*
36	Tyrone	Baronscourt '97—Mrs. Leebody ! Widespread, frequent.
(39	Antrim	Belfast '56 —Hind *420*. Gone now—R. Hanna.)
40	L'derry	Magilligan c. '97, Londonderry '96—Mrs. Leebody !

Naturalized and now abundant in the north-west.

Euphrasia officinalis L. Eyebright.

Divisions all. Abundant.

Euphrasia Salisburgensis Funk.

Census 6—East 0, Centre 2, West 4.

8	Limrck.	Askeaton abundant, Mullagh very abundant '00—P.
9	Clare	Near Ballyvaughan abundant '95—Colgan *218*. Aran Islands '52 (D. Oliver)—Townsend *890*.
15	Galw. SE.	Garryland '00—P. C. Taylor '56 (More)—Townsend *890*.
17	Galw. NE.	Knockmae '00—P. Menlo '92—Groves *352*.
26	Mayo E.	South of L. Mask '95 (Marshall)—Townsend *890*, *891*.
29	Leitrim	Glenade '99—P.

Widespread on the western limestones. Range not yet determined.

Bartsia Odontites Huds.

Divisions all. Abundant.

Bartsia viscosa L.

Census 7—East 3, Centre 0, West 4.

1 Kerry S. Kenmare '99 : frequent—Scully.
2 Kerry N. Ardfert '99 : frequent in south, rare in north—Scully.
3 Cork W. Dunmanway '00 : common—Phillips.
4 Cork Mid Currabinny '00, Coachford, Millstreet : rare—Phillips.
5 Cork E. Fermoy, Chandlee—*Cyb.* I. Midleton—Power *Fl.*
6 Waterfd. North of Lismore '95, F. E. Currey—*Cyb.* II.
34 Dongl.E. Buncrana '91, J. Hunter; Inch '81—*Fl. Don.*

I do not doubt this being native in Donegal.

Pedicularis palustris L. Lousewort.

Divisions all. Common.

Pedicularis sylvatica L. Red Rattle.

Divisions all. Common.

Rhinanthus Crista-galli L. Yellow Rattle.

Divisions all. Abundant.

Melampyrum pratense L. Cow-wheat.

Divisions all, *except 22 Meath.* Generally frequent in rough ground. Rare in the Central Plain, and usually off the limestone, but this appears to be due to its preference for hilly ground, and the fact that the hills are mostly formed of non-calcareous rocks, rather than to any objection on the plant's part to limestone.

Melampyrum sylvaticum L.

(35 Dongl. W.? Near L. Eske—Corry '82 *243*. Not found since.)
39 Antrim Glenariff '90—P. Rare—*Fl. NE.*
40 L'derry Errigal banks near Garvagh '94—P.

Mr. Hart has vainly sought this plant in its Donegal station, and believes a mistake was made.

Orobanche major L. Broomrape (genus).

Census 5+(1)—East 4+(1), Centre 0, West 1.

3 Cork W. Dunmanway (C. Longfield), &c.—Allin *Fl.* '83.
4 Cork Mid Currabinny '00 (Scully) : rare —Phillips.

5 Cork E. Castlemartyr and Inch Castle, Chandlee—*Cyb.* I. Rare.
12 Wexford Killoughrim '90, Moffat—*Cyb.* II. N. and S., rare.
20 Wicklow Dunran '96—B. T. Patterson! Kilbride—*Cyb.* I. Ovoca River basin frequent.
(21 Dublin Rathfarnham, Kingstown—see *Cyb.* II. Not seen for a century.)

Orobanche rubra Smith.

Census 5—East 2, Centre 0, West 3.

9 Clare West of Ennis '00—P. H. Grierson! Extreme N., f.
16 Galw. W. Woodstock '38 (Mackay)—Fraser *332*. L. Corrib—*336*.
35 Dongl. W. Rossgull f., Misses Kinahan—*Fl. Don.* Ards—*629*.
39 Antrim Whitepark Bay '97—P. Frequent—*Fl. NE.*
40 L'derry Castlerock '94—P. Frequent—*Fl. NE.*

The rediscovery of this plant in Connemara is desirable.

Orobanche Hederæ Duby.

Census 22—East 9, Centre 4, West 9.

1 Kerry S. Near Derrynane '90—Scully.
2 Kerry N. Killarney '99: rather rare—Scully.
4 Cork Mid Rochestown &c. '98: rare—Phillips.
5 Cork E. Castletownroche &c. '00: rare—Phillips.
6 Waterfd. Lismore '94—P. Stradbally—Hart *384*. Clonmel.
7 Tipp. S. Cahir castle '00—W. W. Flemyng. Ardfinnan '00—P.
8 Limrck. Askeaton '00—P. Foynes—*803*. Carrigogonell.
9 Clare Inishmore '95—P. Not rare in Burren and Aran.
11 Kilkny. Thomastown '98—P. Graigue, and f. along Nore.
12 Wexford Duncannon fort—B. & M. '92 *103*.
13 Carlow Near Borris '00—T. Hartley!
14 Queen's Sir R. Staples' woods [Dunmore]—*Fl. Hib.* '36.
15 Galw. SE. Church Island near Portumna '96—Colgan.
16 Galw. W. Killeries, W. Andrews—*Cyb.* I.
19 Kildare Near Castletown '00—P.
20 Wicklow Silver Strand '95, Luggela—*Cyb.* II. Arklow Hd.—*371*.
21 Dublin Loughshinny '00: local—Colgan.
25 Roscomn. Rindown castle! '99—W. de V. Kane.
26 Mayo E. Cong abbey '54—More *600*.
28 Sligo Ballysadare '97, Rockwood—P. Hazelwood—Colgan.
29 Leitrim Lough Gill '99—P.

31 Louth Castle woods at Castlebellingham c. '90—Butler *185*.
34 Dongl. E. West of Malin—*Fl. Don.*
35 Dongl. W. About Ramelton and Rathmullan—*Fl. Don.*

Local, and chiefly in the south.

***Orobanche minor** Sutt.

Census 16—East 12, Centre 3, West 1.

3 Cork W. Near Kinsale '91 and Clonakilty '90—Phillips.
4 Cork Mid Flat Head '99 (Scully), near Kinsale '91—Phillips.
5 Cork E. Youghal '00: frequent—Phillips.
6 Waterfd. Tramore '99—Phillips. Cappagh '99—P. Dungarvan.
7 Tipp. S. Vale of Aherlow, Knocklofty, Carrick-on-Suir, '00—P.
10 Tipp. N. Borrisokane '00—Phillips.
11 Kilkny. Thomastown '00—Phillips. North to south, f.—P.
12 Wexford Ballycarney '95—G. E. J. Greene. C. in N., r. in S.
13 Carlow Leighlinbridge '99—P. F. in south, rare elsewhere.
14 Queen's Rathdowney '00—Phillips. Very rare.
19 Kildare Curragh '97—P. Near Athy, L. McDonnell—*Cyb.* II.
20 Wicklow Greystones! '00—Phillips.
21 Dublin Portrane '00: rare—Colgan.
22 Meath Mornington '94—P.
31 Louth Ardee '00, Braganstown—P. C.bellingham—Butler *185*.
38 Down Craigavad! '92 (Marshall)—P. *696*. Ballylesson '81, C. Dickson—*Fl. NE.*

Rapidly establishing itself, especially in the south-east. Has a markedly south-eastern distribution, and a line drawn from Belfast to Bantry cuts off its whole range.

Lathræa Squamaria L. Toothwort.

Census 26—East 13, Centre 8, West 5.

2 Kerry N. Killarney '94—Scully.
3 Cork W. Desert (C. Longfield)—Allin *Fl.* '83.
4 Cork Mid Between Blarney and St. Anne's '00—G. Pim! Rare.
5 Cork E. Blackwater below Mallow c.—More '72 *614*. Rare.
6 Waterfd. Lismore '96, F. E. Currey—*Cyb.* II. Tourin; Clonmel.
7 Tipp. S. Heywood near Clonmel—Miss S. Grubb '00.
8 Limrck. Knockaderry '97, O'Brien—*Hb.* L.F.C.!
9 Clare Co. Clare '98, E. Montgomery—*Hb.* Glasnevin! Ennis.
11 Kilkny. Kilkenny '96—Mrs. Persse! Castlecomer—*Cyb.* II.

13	Carlow	Ballintemple '99—P. Burton Hall '75—*Cyb.* II.
14	Queen's	Capard '00—E. Walker!
15	Galw. SE.	St. Clerans '98—Mrs. Joyce!
16	Galw. W.	Ashford, Miss Jackson—*Cyb.* II.
18	King's	Geashill, Clonad, '96—Russell *818*. Parsonstown.
20	Wicklow	Baltinglass, J. M. Emerson—*Cyb.* I. Rare.
21	Dublin	Woodlands '00 : very rare—Colgan.
22	Meath	Sommerwell '85—P.
23	Westmth.	Belvedere woods—Levinge '94 *484*.
25	Roscomn.	Co. Roscommon (Miss Acton)—More '72 *614*.
31	Louth	Ravensdale '92, Castlebellingham—*Cyb.* II.
33	Ferman.	Whitepark (T. O. Smith)—More '72 *614*.
36	Tyrone	Strabane glen—Delap '96 *275*.
37	Armagh	Tanderagee '96, Ardmore—Lett *478*. Loughgall.
38	Down	Dundonald '98—P. Frequent—*Fl. NE.*
39	Antrim	Cullybackey '00—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Bellarena '94—Mrs. Leebody. Rare—*Fl. NE.*

Widely distributed: rare in the north-west.

Utricularia vulgaris L. Bladderwort (genus).

Census 37+(2)—East 14+(1), Centre 12, West 11+(1).

1	Kerry S.	Waterville '92 : rather rare—Scully.
2	Kerry N.	Lixnaw '90 : rather rare—Scully.
3	Cork W.	Inchigeela '99 : frequent—Phillips.
4	Cork Mid	Carrigrohane '98 : rare—Phillips.
5	Cork E.	Youghal '96: rare—Phillips.
6	Waterfd.	Clonea '99—P.
7	Tipp. S.	Ballinure '98—P.
8	Limrck.	Mullagh '00—P.
9	Clare	Athlunkard '97—G. Fogerty! Monmor bog—*195*.
10	Tipp. N.	Cloughjordan '00, Friar's L.—P. Portumna—Phillips.
11	Kilkny.	Lough Cullin '99, and frequent in NW.—P.
12	Wexford	Not uncommon about Kilmanock—B. & M. *MS.*
13	Carlow	Borris '99—P.
14	Queen's	Cullenagh '97—P. Widespread but rare.
15	Galw. SE.	Loughrea '98—P. South only, not common.
(16	Galw. W. ?	Ballynahinch—Wade 1804 *902*.)
17	Galw. NE.	Barbersfort '99, Terryland River, Clonbrock—P.
18	King's	Geashill and Edenderry '96—P.
19	Kildare	Kildare '97, Leixlip '96—P.

20	Wicklow	Kilcoole '98—P.
(21	Dublin ?	Raheny, Hart—*Fl. Howth.* Colgan finds *neglecta* only.)
22	Meath	West of Navan '96 : frequent—P.
23	Westmth.	Glynnwood '99—P. Frequent in centre.
24	Longfd.	Elfeet Bay '00, Woodlawn '98—P.
25	Roscomn.	Athlone '98, and frequent in NW.—P.
26	Mayo E.	Claremorris '00—P. Ballinrobe—Mrs. Persse ! Cong.
27	Mayo W.	Rathroeen Lough and Ballina '00—P.
28	Sligo	Ballysadare '00, L. Arrow, L. Gara—P.
29	Leitrim	L. Gill and Rinn L. '99—P. L. Allen—Stewart *859*.
30	Cavan	Lough Oughter and Mount Nugent '96—P.
31	Louth	Braganstown and Ardee '97—P. Dundalk—Stewart.
32	Monaghn.	Annaghmakerig Lough '00—P.
34	Dongl. E.	Port Lough, &c. : throughout, rare—*Fl. Don.*
35	Dongl. W.	Burton Port, &c. : rare—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Near Armagh, &c. : north only, frequent, '92—P.
38	Down	Helen's Tower '91—P. Frequent—*Fl. NE.*
39	Antrim	Frocess '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Kilrea '94—P. Derry, Garvagh, D. Moore—*Fl. NE.*

Utricularia neglecta Lehm.

Census 6—East 3, Centre 0, West 3.

1	Kerry S.	Kilgarvan '94 : rare—Scully.
2	Kerry N.	Killarney '90 : rare—Scully.
4	Cork Mid	Near Belgooly '99 (Scully)—Phillips.
21	Dublin	Near Chapelmidway and Balbriggan '93—Colgan *207*.
34	Dongl. E.	NE. of Ballyshannon—*Fl. Don.*
37	Armagh	Mullaghmore Lough '98—Druce *285*.

Possibly frequent : has not been distinguished from *U. vulgaris*.

Utricularia minor L.

Census 39—East 14, Centre 13, West 12.

1	Kerry S.	Glencar '99 : frequent—Scully.
2	Kerry N.	Listowel '94 : frequent—Scully.
3	Cork W.	Inchigeela '00 : frequent—Phillips.
4	Cork Mid	Near Macroom '98 : frequent—Phillips.
5	Cork E.	Youghal '96 : frequent—Phillips.
6	Waterfd.	Clonea and Ballyscanlan '99—P.

7	Tipp. S.	Ballinure and south of Cashel '99—P.
8	Limrck.	Castleconnell bog '00—R. D. O'Brien! Mullagh '00—P.
9	Clare	Lisdoonvarna '00—P. Frequent in south—Stewart.
10	Tipp. N.	L. Ourna '99, Cloughjordan—P. Portumna—Phillips.
11	Kilkny.	Tory Hill '99, Lough Cullin, Urlingford—P.
12	Wexford	Ballykelly bog (Miss Glascott)—B. & M. *102*.
13	Carlow	Gowlin '99 : frequent—P.
14	Queen's	Cullenagh '97, Emo, Ballybrophy—P.
15	Galw. SE.	Near Woodford '98—P. Castle Taylor—More *598*.
16	Galw. W.	Roundstone '96—P. Frequent throughout.
17	Galw. NE.	Barbersfort '99, Clonbrock '96—P.
18	King's	Clonmacnoise '99, Banagher '98—P.
19	Kildare	Kildare '97, Carbury '96—P.
20	Wicklow	Callary bog, W. Archer—*Guide* '78.
22	Meath	West of Navan '96—P.
23	Westmth.	Mullingar '97—Carr. Centre and west frequent.
24	Longfd.	Trillickacurry '98 : west half frequent—P.
25	Roscomn.	Corkip Lough '99 : rare—P.
26	Mayo E.	Claremorris, Ballymore L. '00—P. Ballinrobe.
27	Mayo W.	Newport '99—Marshall. Frequent.
28	Sligo	East of Cliffony '00—P. Near L. Easky '96—Colgan.
29	Leitrim	Uragh Lough and Dromod '99—P.
30	Cavan	Lough Oughter '96—P.
31	Louth	Braganstown '97—P. Not rare in centre.
32	Monaghn	Bragan, &c. : not rare in the north, '00—Waddell.
33	Ferman.	South of Belleek '00—P.
34	Dongl. E.	Port Lough, &c. : throughout, frequent—*Fl. Don.*
35	Dongl. W.	Gweebarra, &c. : throughout, frequent—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles. Leckpatrick bog—*838*.
37	Armagh	Frequent '92—P.
38	Down	Helen's Tower '91—P. Frequent—*Fl. NE.*
39	Antrim	Rasharkin '94—P. Frequent—*Fl. NE.*
40	L'derry	Maghera, Garvagh, '94—P. Common, Moore—*Fl. NE.*

Rare in the south-east.

Utricularia intermedia Hayne.

Census 22+(1)—East 3+(1), Centre 8, West 11.

1	Kerry S.	Glencar '99 : rather frequent—Scully.
2	Kerry N.	Killarney '94 : rare and local—Scully.
3	Cork W.	Durrus '72, Leap '71 (Allin) : rare—Phillips.

(4 Cork Mid? Ballyphehane bog—Drummond '19 *287*. Not seen since.)
7 Tipp. S. Between Cashel and Fethard '98—P.
9 Clare Lisdoonvarna '00—W. de V. Kane! Crusheen—Corry *240*.
10 Tipp. N. Portumna '00—Phillips. L. Ourna, Youghal Bay—P.
15 Galw. SE. Marble Hill, and Lough Derg below Woodford, '98—P.
16 Galw. W. Roundstone '96—P. Frequent.
17 Galw. NE. Terryland River and Menlo '99—P.
18 King's Lough Goura, Banagher, Shannon Harbour, '98—P.
19 Kildare Marsh near Curragh, and south of Kildare, '97—P.
23 Westmth. Tullaghan bog '95 (E. F. Linton)—Levinge *486*.
25 Roscomn. Corkip Lough and Ballinasloe '99—P.
26 Mayo E. Near Cong '96—Marshall *537*.
27 Mayo W. Mallaranny '99—Marshall. Frequent, local.
28 Sligo Lough Gara '97—P.
30 Cavan Near Lough Oughter '96—P.
33 Ferman. Between Pettigoe and Ballyshannon, Hart—*Cyb.* II. Scottsborough—Mackay *522*.
34 Dongl. E. Ballyshannon district only—*Fl. Don.*
35 Dongl. W. Gweebarra, &c. : local—*Fl. Don.*
39 Antrim Near Lough Naroon '94—P.
40 L'derry Foyle above Londonderry, D. Moore—*Cyb.* I.

Essentially western in its distribution.

Pinguicula vulgaris L. Butterwort (genus).

Divisions all, *except 4 Cork Mid, 5 Cork E., 6 Waterford.* Becoming rare in the south, where it gives place to *P. grandiflora.* Elsewhere frequent.

Pinguicula grandiflora Lamk.

1 Kerry S. Kenmare '99 : frequent—Scully.
2 Kerry N. Killarney '99 : chiefly in the south—Scully.
3 Cork W. Inchigeela '00 : common—Phillips.
4 Cork Mid Donoughmore '96 : frequent—Phillips.
5 Cork E. Carrigacunna castle and Mallow—Allin *Fl.* '83. Rare.

Confined to the south-west, where it is often abundant. Introduced and spreading at foot of Blackstairs, Co. Wexford (Miss Cooper *228*).

Pinguicula lusitanica L.

Census 31—East 13, Centre 6, West 12.

1 Kerry S. Kenmare '99 : widespread—Scully.

2	Kerry N.	Near Listowel '94 : rather frequent—Scully.
3	Cork W.	Dunmanway '00 : frequent—Phillips.
4	Cork Mid.	Donoughmore '96 : frequent—Phillips.
5	Cork E.	Rathcooney '97 : rare—Phillips.
6	Waterfd.	Clonea marsh '99—P. Glenagad, Miss Grubb—*Cyb.* I.
7	Tipp. S.	Kilbeheny '97—Phillips. Below L. Curra—Hart *372*.
8	Limrck.	Foynes '99—Somerville.
9	Clare	Black Head '99—Miss Knowles. Lisdoonvarna—*240*.
11	Kilkny.	L. Cullin and Brandon Hill '98—P. Woodstock—*902*.
12	Wexford	Sleighbury '95—G. E. J. Greene! NE. chiefly, rare.
13	Carlow	Polmounty R., and along base of Mt. Leinster, '98—P.
14	Queen's	Mountmellick bog—Wade 1804 *902*.
15	Galw. SE.	Dalystown '98, Chevy Chase '00—P. And in SW., r.
16	Galw. W.	Muckanaght '98—Colgan. Frequent throughout.
17	Galw. NE.	Near Clonbrock '96—P.
20	Wicklow	Drumgoff '98—D.N.F.C. *308*. Centre and NE.. f.
21	Dublin	Three Rock Mountain '00 : local—Colgan.
25	Roscomn.	Near Athlone '98—P.
26	Mayo E.	Callow Lough and Carrowkeribly Lough '00—P.
27	Mayo W.	Nephin '00—P. Frequent.
28	Sligo	Ballysadare '00—P. L. Talt—Colgan. Cliffony.
29	Leitrim	Near Manorhamilton '84—B. & V. *112*.
31	Louth	Ravensdale '00—Mrs. Swan. Carlingford Mtn.—*381*.
34	Dongl. E.	Throughout frequent—*Fl. Don.*
35	Dongl. W.	Throughout frequent—*Fl. Don.*
36	Tyrone	Bessy Bell '96—Miss Knowles.
37	Armagh	Slieve Gullion '93, Camlough Mountain '92—P.
38	Down	Slieve Bearnagh '94—P. F., chiefly in south—*Fl. NE.*
39	Antrim	Slemish '00—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Eglinton '98—Mrs. Leebody. Frequent—*Fl. NE.*

Mostly follows the hills, and is in consequence commoner round the margin of Ireland than in the centre, and off the limestone than on it.

‡**Verbena officinalis** L. Vervain.

Census 24—East 12, Centre 4, West 8.

1	Kerry S.	Kenmare '99 : rather rare and local—Scully.
2	Kerry N.	Tralee '99 : rather rare—Scully.
3	Cork W.	Skibbereen '97 : frequent—Phillips.
4	Cork Mid.	Ringaskiddy '00 (Scully) : frequent—Phillips.
5	Cork E.	Carrigtwohill '00 : frequent—Phillips.

6	Waterfd.	Cappoquin '99—P. Not rare in the west.
7	Tipp. S.	Fethard '00—Phillips. Frequent in the south.
8	Limrck.	Askeaton '00—P. Patrick's Well '98—*Hb.* L.F.C.!
9	Clare	Ballyvaughan! '00—Miss Knowles. North only, rare.
10	Tipp. N.	Dromineer! '00—Phillips.
11	Kilkny.	Innistioge! '00—Phillips. Very frequent.
12	Wexford	Ferns '96—G. E. J. Greene! F. in S.—B. & M. *MS.*
13	Carlow	Killedmond '98, Milford, Borris, Bagnalstown—P.
15	Galw. SE.	Kilcolgan '99—P. Frequent in the west.
16	Galw. W.	Kilbeg ferry '99—P. Clonbur—M. & S. *545*.
17	Galw. NE.	Lough Atalia '99—P.
19	Kildare	Athy, Nurney, Monasterevan, '97—P.
20	Wicklow	Bray '94—P. Kilmacanoge—*Fl. Hib.*
21	Dublin	Loughlinstown '00: rare—Colgan.
22	Meath	Beauparc '00, Bective '96—P.
26	Mayo E.	Cong frequent '95—M. & S. *545*.
31	Louth	Boyne obelisk '96—P.
34	Dongl. E.	Pettigo '85—*Fl. Don.*
38	Down	Half a mile from Poyntzpass '92—Lett!

Thoroughly established and often abundant, chiefly about villages, in the southern half of Ireland. Much rarer and obviously an introduction in the northern half. The majority of its stations are situated on the limestone.

‡**Mentha rotundifolia** Huds. Mint (genus).

Census 18—East 10, Centre 3, West 5.

1	Kerry S.	*Kenmare '99: rare—Scully.
2	Kerry N.	*Killarney '90: rare—Scully.
3	Cork W.	‡Bantry '98, Skibbereen, Goleen: rare—Phillips.
4	Cork Mid	‡Crosshaven '00: rare—Phillips.
5	Cork E.	‡Ballyvodock '00, Eastferry: rare—Phillips.
6	Waterfd.	Near Lismore "looking wild" '84—Hart *388*.
7	Tipp. S.	Kilsheelin, Miss Grubb—*Cyb.* I.
11	Kilkny.	Snowhill '89—B. & G. *101*.
12	Wexford	*Rosdroit, R. Urrin—Moffat '89 *552*. Fethard—*Cyb.* I.
14	Queen's	Erril and Durrow '00—Phillips.
17	Galw. NE.	Near Galway (Stewart)—More '72 *614*.
20	Wicklow	Enniskerry—*Guide* '78. Roundwood; Glendalough.
21	Dublin	*Loughlinstown '94 &c., Colgan—*Cyb.* II.
26	Mayo E.	Ballinrobe '91—Mrs. Persse!

27 Mayo W. *Foot of Nephin near a cottage (Hart)—More '72 *614*.
37 Armagh *Rare, and only as an escape, '92—P.
38 Down ‡Saul '92—P. *Frequent—*Fl. NE.*
39 Antrim *Crumlin, &c.: rare—*Fl. NE.*

All the mints easily establish themselves. This and several other species are frequently grown in cottage gardens, and no doubt originated there in all their Irish stations. The present species and *M. piperata* appear to have spread and established themselves sufficiently to justify their inclusion in the Irish list.

‡Mentha piperata L. Peppermint.

Census 24—East 11, Centre 6, West 7.

1 Kerry S. *Kenmare '90: rare—Scully.
3 Cork W. ‡Between Innishannon and Ballinadee—Allin *Fl.* '83.
4 Cork Mid ‡Near Coachford '97: rare—Phillips.
5 Cork E. †Midleton, &c.—Allin *Fl.* '83. Rare—Phillips.
6 Waterfd. Clonmel, Miss A. Taylor—*Cyb.* I.
8 Limrck. Bilboa River glen '00—P.
11 Kilkny. Kilkenny '00—Phillips. ‡Thomastown '98—P.
13 Carlow By the Barrow at Bagenalstown '99—P.
14 Queen's †Maryborough '99, ‡Mountrath, ‡Cullenagh—P.
16 Galw. W. Streamstown—*Ir. Fl.* '33.
17 Galw. NE. †South-west of Knockmae '99—P.
19 Kildare Monasterevan '93—P. Ballitore—Carroll *192*.
21 Dublin By the Dodder near Rathfarnham '93, Colgan—*Cyb.* II.
25 Roscomn. †Slieve Bane '00, †Corkip Lough '99—P.
26 Mayo E. †Carrowkeribly Lough '00—P.
29 Leitrim †Garadice Lough '00—P.
30 Cavan Farnham—*Fl. Hib.* '36.
34 Dongl. E. *Cloghorna, well established, '98—Hart *405*. Local, rare.
35 Dongl. W. *Fanet and near Lough Eske—*Fl. Don.*
36 Tyrone Canal bank at Strabane '96—Miss Knowles!
37 Armagh ‡Tartaraghan and Killylea '92—P.
38 Down Near Ballynahinch (R. Hanna)—S. & P. *874*. Rare.
39 Antrim Massereene Park '90—P. Carnmoney!—Stewart. Rare.
40 L'derry Curleyburn, Muff, D. Moore—*Cyb.* I., *Fl. Ulst.*

See remarks appended to the last species.

Mentha hirsuta Huds. Water Mint.

Divisions all. Abundant.

Mentha sativa L.

Census 34—East 15, Centre 11, West 8.

1	Kerry S.	Kenmare '99: frequent—Scully.
2	Kerry N.	Killarney '00: frequent—Scully.
3	Cork W.	Skibbereen and Enniskeane '96: frequent—Phillips.
4	Cork Mid	Carrigrohane '98: type f., *M. rubra* rare—Phillips.
5	Cork E.	Glanmire '00: type c., *M. gentilis* rare—Phillips.
6	Waterfd.	Tramore '99—Phillips. Clonmel—Miss S. Grubb.
7	Tipp. S.	Fethard (*M. gracilis* v. *cardiaca*) '00—Phillips.
8	Limrck.	Longpavement '97, Bentley—*Hb.* L.F.C.!
10	Tipp. N.	Dromineer, Portumna, '00—Phillips. Cloughjordan.
11	Kilkny.	Kilkenny '00—Phillips. Frequent, probably common.
12	Wexford	Enniscorthy '98—P. Bloomfield and Clohass bog (*M. rubra*), Miss Farmer—More *614*.
13	Carlow	St. Mullin's '98—P. Ballytrain (*M. rubra*)—*Cyb.* I.
14	Queen's	Portarlington (*M. gentilis* v. *Pauliana*) '96, Graigue—P.
15	Galw. SE.	Portumna '00—Phillips. Woodford (v. *paludosa*)—*502*.
18	King's	Clara '99 (v. *paludosa*)—P. Frequent.
19	Kildare	Leixlip '96—P. Straffan, J. Douglas—*Cyb.* I.
20	Wicklow	Kilmacanoge '94—P.
21	Dublin	R. Dodder near Tallaght '00: rare—Colgan.
22	Meath	Oldcastle '96—P.
24	Longfd.	Ballymahon '00, and common by Lough Ree—P.
25	Roscomn.	Slieve Bane '00—P. Lough Allen '84—Stewart *859*.
26	Mayo E.	By the Moy, More—*Cyb.* I.
27	Mayo W.	Lough Conn south of Derreen '00—P.
28	Sligo	Ballysadare '97—P. Sligo '85, Linton—B.E.C. '85.
29	Leitrim	Garadice Lough '00—P. Throughout, ?frequent.
30	Cavan	Lough Ramor (*M. gracilis* v. *cardiaca*), Mount Nugent, '96—P. Common in the north-west—Stewart *854*.
31	Louth	Boyne mouth '96—P.
33	Ferman.	Lower L. Erne c. '92—P. South-west c.—Stewart *854*.
34	Dongl. E.	S. of Bundoran '98—P. Near Ballyshannon—*Fl. Don.*
35	Dongl. W.	Fanet—*Fl. Don.*
36	Tyrone	L. Neagh '96—Miss Knowles. Glenmornan R.—*838*.
37	Armagh	Frequent throughout '92—P.
38	Down	Downpatrick '99—P. Common—*Fl. NE.*
39	Antrim	Ballycastle '97—P. Common—*Fl. NE.*
40	L'derry	Bellarena '98—Mrs. Leebody. Common—*Fl. NE.*

M. sativa as here given includes *M. rubra*, *M. gracilis*, and *M. gentilis*. The above records refer to the type except where otherwise stated.

Mentha arvensis L. Corn Mint.

Divisions all. Common.

†Mentha Pulegium L. Penny-royal.

Census 11+(2)—East 6+(2), Centre 1, West 4.

1	Kerry S.	†Kenmare '99: rather frequent—Scully.
2	Kerry N.	†Killorglin '99: rather frequent—Scully.
3	Cork W.	Goleen '96: rare—Phillips.
4	Cork Mid	†Near Kinsale—Allin *Fl.* '83. Rare—Phillips.
5	Cork E.	Near Mallow—Allin *Fl.* '83. Rare—Phillips.
8	Limrck.	Rosbrien '97 (var. *erecta*), Bentley—*Hb.* L.F.C.!
9	Clare	Ennis '92, Levinge—*Cyb.* II.
12	Wexford	Fethard, J. Morrison—*Cyb.* I.
20	Wicklow	Base of Great Sugarloaf, D. Moore—*Cyb.* I.
(21	Dublin	Howth (Miss R. Mahaffy)—P. '95 *736*. ? Casual.)
(38	Down	Tullybranagan mountain—*Ir. Fl.* '33. Not there now.)
39	Antrim	Lough Beg '94—Miss Knowles and P.
40	L'derry	Creagh bog plentiful, D. Moore—*Cyb.* I.

Very local, and chiefly in the south, where it is possibly native.

Lycopus europæus L. Gipsywort.

Census 37—East 14, Centre 12, West 11.

1	Kerry S.	Kenmare '98—P. Frequent—Scully.
2	Kerry N.	Killarney '99: frequent—Scully.
3	Cork W.	Dunmanway '00: frequent—Phillips.
4	Cork Mid	Belgooly '00 (Scully): frequent—Phillips.
5	Cork E.	Rostellan '98: frequent—Phillips.
6	Waterfd.	Ballyscanlan L. '99—P. F. in SW.—Hart *384*, *388*.
7	Tipp. S.	Carrick-on-Suir '00—P. Near Clonmel—Miss S. Grubb.
8	Limrck.	Lough Gur '00—P. Common in the north.
9	Clare	Doonbeg '99—Miss Knowles. Frequent throughout.
10	Tipp. N.	Dromineer '00—Phillips. Frequent throughout.
11	Kilkny.	Inistioge '98—P. Frequent in the south-east.
12	Wexford	Enniscorthy '98—P. Frequent.
13	Carlow	Borris '99—P. Frequent along the Barrow.
14	Queen's	Grattan aqueduct '97, Mountmellick '96—P.
15	Galw. SE.	Woodford '98: SE. and SW., not rare—P.
16	Galw. W.	Glen Inagh '98—Colgan. Throughout, frequent.
17	Galw. NE.	Ballyloughaun and Terryland River '99—P.

18	King's	Tullamore '99, Shannon Harbour, Banagher—P.
19	Kildare	Robertstown '98, Maynooth '96—P.
21	Dublin	Clondalkin '00: local—Colgan.
22	Meath	Beauparc '00—P. Widespread but rare.
23	Westmth.	Kiltoom—Levinge '94 *484*.
24	Longfd.	Lough Gowna and Ballymahon '00—P.
25	Roscomn.	Ballinasloe '99, Lough Key '97—P.
27	Mayo W.	Pontoon '00—P.
29	Leitrim	Ballinamore '00—Somerville. Garadice L., Rinn L.—P.
30	Cavan	Scrabby '00—P. Frequent.
31	Louth	Bellurgan '00, Braganstown bog '98—P.
32	Monaghn.	Mullaghmore L. '00—Waddell. Dartrey—Somerville.
33	Ferman.	Castle Caldwell, Inishdivan, '00—West. Crum—*108*.
34	Dongl. E.	Clonmany, Meendoran, '98—Hart *405*. Greencastle.
35	Dongl. W.	Carrablagh, Killybegs, &c.: local and rare—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles. Dungannon '76—Stewart.
37	Armagh	Frequent throughout '92—P.
38	Down	Killinchy '99—P. Frequent—*Fl. NE.*
39	Antrim	L. Neagh '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Kilrea '94—P. Frequent.

Will probably prove to be frequent in the greater number of the divisions.

Origanum vulgare L. Marjoram.

Census 34—East 15, Centre 11, West 8.

1	Kerry S.	Kenmare '99: very local—Scully.
3	Cork W.	Glengariff '94: rare—Phillips.
4	Cork Mid	Carrigrohane '98: rare—Phillips.
5	Cork E.	Midleton '00: frequent—Phillips.
6	Waterfd.	Dungarvan '99, Cappagh, Clonmel—P.
7	Tipp. S.	Fethard '00—Phillips. C. on lower course of R. Suir.
8	Limrck.	Adare '00—P. Locally abundant in north.
9	Clare	Ballyvaughan '00—O'Kelly! Inishmore; Limerick.
10	Tipp. N.	Lough Ourna '99—P. Frequent.
11	Kilkenny	Thomastown! '00—Phillips. Frequent.
12	Wexford	Fethard '82, Newtownbarry '81—Hart *384, 371*. Rare.
13	Carlow	Bagenalstown '99: c. by Barrow—P. Rare by Slaney.
14	Queen's	Maryborough '96: frequent—P.
15	Galw. SE.	Portumna '00—Phillips. Frequent in SW.—P.
16	Galw. W.	Common around Cong '95—M. & S. *545*.
17	Galw. NE.	Near Galway '96—P.

18	King's	Clara '99—P. Frequent throughout.
19	Kildare	Curragh '97, Newbridge, Monasterevan—P.
20	Wicklow	Enniskerry abundant '00—P. And thence to Bray.
21	Dublin	Near Tallaght '00: locally abundant—Colgan.
22	Meath	Navan '00: frequent except in N. and S.—P.
23	Westmth.	Near Glynnwood House '99—P.
24	Longfd.	Elfeet Bay '00: common along Lough Ree—P.
25	Roscomn.	Mote Park '97: southern half frequent—P.
26	Mayo E.	Common around Cong '95—M. & S. *545*.
27	Mayo W.	Ballina '00—P.
30	Cavan	Mount Nugent '96—P.
31	Louth	Braganstown '97, Killencoole, Boyne obelisk—P.
34	Dongl. E.	†River Erne and Brown Hall—*Fl. Don.*
36	Tyrone	Newtownstewart and Strabane '00—Miss Knowles.
37	Armagh	Loughgall and Tynan '92—P.
38	Down	‡Portavoe House '90—P. †Very rare—*Fl. NE.*
39	Antrim	Antrim! '86—D. Redmond. †Very rare—*Fl. NE.*
40	L'derry	Eglinton '94—Mrs. Leebody. Ballygillan; Fincairn.

A calcicole plant, abundant over the greater part of the limestone area, yet rare in or absent from some of the divisions where limestone prevails, such as Westmeath and Sligo. Of doubtful standing in the north, and possibly an escape there.

Thymus Serpyllum L. Wild Thyme.

Divisions all, *except 13 Carlow, 23 Westmeath, and 36 Tyrone.* A plant of most uneven distribution. One station only in 24 Longford, 32 Monaghan, and 37 Armagh. The only feature which the above six divisions have in common which might influence plant-distribution is that they are all inland. But the Wild Thyme, though generally more plentiful near the coast, is abundant in many inland divisions likewise.

Thymus Chamædrys Fr.

2	Kerry N.	Near Ardfert '89—Scully.
5	Cork E.	Near Whitegate '98—Phillips.

†**Calamintha Acinos** Clairv. Basil Thyme.

Census 8—East 4, Centre 4, West 0.

7	Tipp. S.	Gravel-pit NW. of Cahir abundant '00—P.
10	Tipp. N.	Near Nenagh '97, Vowell—*Cyb.* II.
12	Wexford	*Knockmore and Mangan—Moffat '89 *552*. Ballyhyland.

14	Queen's	Maryborough in three stations '96—P.
19	Kildare	Curragh gravel-pit c. '97—P. Athy—Mackay *526*.
20	Wicklow	Murrough on gravelly banks, D. Moore—*Cyb.* I.
21	Dublin	Portmarnock '00—P. Very rare, ?casual—Colgan.
24	Longford	St. Martin's Well '85-6—B. & V. *113*.

Rare and local. Well established in its stations in 7, 14, 19 at least.

Calamintha officinalis Mœnch. Calamint.

Census 25—East 11, Centre 6, West 8.

1	Kerry S.	Kenmare '99 : rare and local—Scully.
2	Kerry N.	Killarney '00 : rare and chiefly in the south—Scully.
3	Cork W.	Ballylickey '98, Timoleague : rare—Phillips.
4	Cork Mid	Carrigaline '00 (Scully) : f. on limestone—Phillips.
5	Cork E.	Midleton '00 : frequent—Phillips.
6	Waterfd.	Passage, Ballinamona—B. & G. '89 *100*. Rare.
7	Tipp. S.	Fethard '00—Phillips. Ardfinnan abundant '00—P.
8	Limrck.	Askeaton '00—P.
9	Clare	Inishmore '95—P. And in Burren, rare.
10	Tipp. N.	Cloughjordan '00—Phillips.
11	Kilkny.	Kilkenny '00—Phillips. Very frequent.
12	Wexford	Island quay, Dollar Point (Miss Glascott)—B. & M. *MS.*
13	Carlow	Bagenalstown '99, Leighlinbridge, Milford—P.
15	Galw. SE.	North of Gort '00—P.
16	Galw. W.	Kilbeg ferry '99—P. Galway—*92*. Oughterard—*336*.
17	Galw. NE.	Kilcornan '37—Ball *93*.
19	Kildare	Co. Kildare—*Cyb.* I.
20	Wicklow	Vallombrosa '94—More. Several old records [?].
21	Dublin	Knockmaroon '00—Colgan.
22	Meath	Beauparc '00—P.
24	Longfd.	Newtowncashel and Elfeet Bay '00—P.
25	Roscomn.	Lough Ree, F. J. Foot—*Cyb.* I.
26	Mayo E.	Cong '95—Marshall, and *Cyb.* II.
31	Louth	Boyne Obelisk '96—P.
34	Dongl. E.	‡Near Ballyshannon, H. Allingham—*Fl. Don.*

Strongly calcicole, and almost confined to the limestone. The Wicklow locality, which seems an exception, is really not so, as the limestone drift of the Bray River valley harbours several calcicole plants. The East Waterford and West Cork stations appear to be genuine exceptions, but possibly limestone drift occurs. There seems no reason for doubting the Donegal station's being aboriginal.

Salvia Verbenaca L. Clary.

Census 10—East 7, Centre 1, West 2.

3	Cork W.	Baltimore '96, Clonakilty: S. only, rare—Phillips.
5	Cork E.	Youghal '00—Phillips. Ballinacurra—Power *Fl.*
6	Waterfd.	Clonea '99—P. Ardmore '82—Hart *384*.
8	Limrck.	Askeaton '00—P.
9	Clare	Fort Fergus '96 (Miss Kathleen Ball)—West.
11	Kilkny.	Kilkenny, J. Sim; Lackenhill, S. Madden—*Cyb.* I.
12	Wexford	Rosslare '97—Marshall. Frequent in the south.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.
21	Dublin	Howth '00: very rare—Colgan.
31	Louth	Queensborough '96—P. N. of Drogheda—*Cyb.* II.

Rare and local, and chiefly in the SE.; absent from the north.

***Nepeta Cataria** L. Cat Mint.

Census 16+(4)—East 4+(3), Centre 7, West 5+(1).

(3	Cork W.	Timoleague—Drummond '19 *287*. Not seen since.)
7	Tipp. S.	Clonmel, Miss S. Grubb—*Cyb.* I.
8	Limck.	*Limerick! '00—R. D. O'Brien.
9	Clare	Ballyvaughan '54—More *600*. Near Limerick.
11	Kilkny.	Danesfort, Ballykeefe, S. Madden—*Cyb.* I. Rare.
13	Carlow	‡Near Carlow, J. Morrison—*Cyb.* I.
15	Galw. SE.	Kinvarra '92, Levinge—*Cyb.* II. Loughrea—*336*.
16	Galw. W.	*Clonbur '96—Marshall. NW. of Galway—*Cyb.* I.
18	King's	Parsonstown (M. Dowd)—More '72 *614*.
(19	Kildare	Curragh 1732, Annot. in Threlkeld—*Cyb.* II.)
21	Dublin	Rush and Skerries—*Ir. Fl.* '33.
24	Longfd.	Newtowncashel and Elfeet Bay abundant '00—P.
25	Roscomn.	Bracknagh '85–6—B.&V. *113*. Perryborough—*Cyb.* II.
26	Mayo E.	Cong '95, Miss Jackson—*Cyb.* II.
27	Mayo W.	‡Between Newport and Castlebar '37—Ball *93*.
33	Ferman.	Colebrooke River (T. O. Smith)—More '72 *614*.
35	Dongl. W.	*Mulroy and Dunfanaghy—*Fl. Don.*
38	Down	†Ardglass, Stewart—*Fl. NE.*
(39	Antrim	Ballycastle, Miss Hincks—*Fl. Ulst.* '64.)
(40	L'derry	Magilligan, one plant, '63—B.N.F.C. *117*.)

At best but an established escape, now extinct in many of its old stations.

Nepeta Glechoma Benth. Ground Ivy.

Divisions all. Common.

Scutellaria galericulata L. Skull-cap (genus).

Census 33—East 12, Centre 10, West 11.

1	Kerry S.	Rossdohan '92 : rare and local—Scully.
2	Kerry N.	Killarney '00 : rare—Scully.
3	Cork W.	Skibbereen '96 : rare—Phillips.
4	Cork Mid	Carrigrohane '98 : frequent—Phillips.
5	Cork E.	Midleton '00 : frequent—Phillips.
6	Waterfd.	Ballyscanlan Lough '99—P.
7	Tipp. S.	Bog at Rehill '41—Miss S. Grubb !
9	Clare	Ballycar '85-6—Stewart *863*. Miltown Malbay.
12	Wexford	Courtown '96—P. Below Macmine '81—Hart *371*.
13	Carlow	Borris demesne '99—P.
14	Queen's	Nore below Durrow '84—Hart *388*.
15	Galw. SE.	Garryland '00, Portumna '98—P.
16	Galw. W.	Inveran '95—Colgan. Local and rare.
17	Galw. NE.	Donamon '97—P.
20	Wicklow	Ballykean '81, Miss A. G. Kinahan—*Cyb.* II.
21	Dublin	Canal below Lucan, about '87 (Scully)—Colgan *207*.
22	Meath	Whitewood Lough '97—P.
23	Westmth.	W. of Mullingar '99—P. L. Owel—Levinge *484*.
24	Longfd.	Lough Ree below Ballymahon '00—P.
25	Roscomn.	Rockville '99 : frequent—P.
26	Mayo E.	South of Lough Mask '95—M. & S. *545*.
28	Sligo	Lough Arrow '97—P.
29	Leitrim	Rinn Lough and Lough Gill '99—P.
30	Cavan	Farnham '96—P. Not rare.
32	Monaghn.	Glasslough '00—Waddell. Rather frequent.
33	Ferman.	Inishfree, &c., '00—West and Tetley. Frequent.
34	Dongl. E.	Port Hall and along the Erne—*Fl. Don.*
35	Dongl. W.	Mulroy, Milford, Killybegs—*Fl. Don.*
36	Tyrone	Newtownstewart '96—Miss Knowles.
37	Armagh	Lough Gilly '94—W. F. Johnson ! F. in the north.
38	Down	Above Hilltown '00—Waddell. Rare—*Fl. NE.*
39	Antrim	Shane's Castle '00—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Kilrea, D. Moore : rare—*Fl. NE.*

Scutellaria minor Huds.

Census 16—East 8, Centre 2, West 6.

1	Kerry S.	Kenmare '99 : frequent—Scully.
2	Kerry N.	Abbeydorney '99 : f. in south, r. elsewhere—Scully.
3	Cork W.	Dunmanway '00 : common—Phillips.
4	Cork Mid	Donoughmore '96 : frequent—Phillips.
5	Cork E.	Near Rathcooney '90 : frequent—Phillips.
6	Waterfd.	Ballyscanlan Lough '99—P. Not rare in SW.
7	Tipp. S.	Bog at Rehill '41—Miss S. Grubb !
9	Clare	Monmor bog '45—Carter *195*.
11	Kilkny.	Tory Hill '99 : frequent in the south-west—P.
12	Wexford	Ballywilliam '98—P. Frequent.
13	Carlow	Polmounty River '98—P. Near Borris—Hart *381*.
16	Galw. W.	Oughterard '99—P. Throughout, frequent.
20	Wicklow	L. Dan '83 (D'Arcy)—Colgan. Centre and NE., ? rare.
21	Dublin	Howth '00—P. Ireland's Eye—*Cyb.* II.
26	Mayo E.	Near Foxford ['64]—More *MS*.
27	Mayo W.	Pontoon '00—P. Near Foxford—More *MS*.

Southern half of Ireland, ranging further up the west coast than the east, like several other species.

Prunella vulgaris L. Self-heal.

Divisions all. Common.

***Marrubium vulgare** L. White Horehound.

Census 11—East 6, Centre 1, West 4.

1	Kerry S.	Derrynane, an escape, Scully—*Cyb.* II.
2	Kerry N.	Tralee, an escape, Scully—*Cyb.* II.
4	Cork Mid	Carrigaline '96—Phillips. Ringaskiddy—Allin *Fl.*
5	Cork E.	Great Island (Scott), Eastferry—Power *Fl.* '45.
9	Clare	Fanore '00—Miss Knowles. N. frequent, S. rare.
10	Tipp. N.	Dromineer '99—P.
11	Kilkny.	Kilkenny '98—Mrs. Persse.
12	Wexford	Rosslare '96—Marshall *537*. Curracloa—*Cyb.* I.
16	Galw. W.	Oughterard '94—Mrs. Persse !
20	Wicklow	Kilcoole '00—P. Several old records—see *Cyb.* II.
21	Dublin	Rush, Woodlands, Miss A. G. Kinahan—*Cyb.* II.

On the same footing as *Nepeta Cataria*.

Stachys Betonica Benth. Betony.

Census 11—East 6, Centre 2, West 3.

1	Kerry S.	Kenmare '00—Scully.
2	Kerry N.	Killarney '99 : local, chiefly in the south—Scully.
6	Waterfd.	Near Waterford '86, A. R. Friel—*Cyb.* II. West of Cappoquin—Smith 1746 *844*.
11	Kilkny.	Near Waterford (Chandlee)—Carroll '57 *193*.
12	Wexford	Rosdroit and Curraghmore—B. & M. '92 *102*. Bannow bay, MacMillan—*Cyb.* II.
23	Westmth.	Lough Ree at Noughaval Bay '99—Miss R. Smith!
24	Longfd.	Saint's Island! '99—Miss R. Smith.
35	Dongl.W.	Lough Fern '92—Hart *397*.
37	Armagh	In North Armagh '99—Johnson *438*. Crowhill '77, (Stewart)—P. *701*.
39	Antrim	Broughshane '96—Brenan! Shane's Castle—Wade *902*.
40	L'derry	Kilrea '00—Mrs. Crookshank!

Very rare and local. Old records from West Cork, N. Tipperary, Dublin, and Clare need confirmation.

Stachys palustris L. Marsh Woundwort.

Divisions all. Common.

Stachys sylvatica L. Hedge Woundwort.

Divisions all. Common.

Stachys arvensis L.

Census 26—East 13, Centre 4, West 9.

1	Kerry S.	Valentia '92 : rather frequent—Scully.
2	Kerry N.	Ballybunnion '94 : rather frequent—Scully.
3	Cork W.	Schull '96, Millstreet '00 : frequent—Phillips.
4	Cork Mid	Donoughmore '96 : common—Phillips.
5	Cork E.	Midleton '00 : common—Phillips.
6	Waterfd.	Dungarvan '99, Tramore, Dunmore—P.
7	Tipp. S.	Tipperary, Miss Grubb—*Cyb.* I.
9	Clare	Inishmore '95—P. Rare and local.
11	Kilkny.	Thomastown '98—P. Frequent in the south-east.
12	Wexford	Enniscorthy '98—P. Frequent throughout.
13	Carlow	Bagenalstown '00—Phillips. Local, frequent.
15	Galw. SE.	Parkmore '99, south of Kinvarra '00—P.
16	Galw. W.	Clifden '98—Colgan. Very rare.
18	King's	Near Tullamore—Mackay '25 *522*.

20 Wicklow Kilmacanoge '94—P. Shillelagh; Wicklow.
21 Dublin Ballybrack '00 : rare—Colgan.
26 Mayo E. Foxford ['64], More—*Cyb.* I.
27 Mayo W. Pontoon '00—P.
31 Louth Ballymascanlan '00 : N. half c.—P. Mansfieldstown.
34 Dongl. E. Culdaff '98—Hart *405*. ‡Extreme N. only—*Fl. Don.*
35 Dongl. W. ‡Horn Head, &c. : extreme north only—*Fl. Don.*
36 Tyrone Strabane '00—Miss Knowles.
37 Armagh Clare '92—P.
38 Down Saul '90—P. South f., north v.r.—*Fl. NE.* and *874*.
39 Antrim Broughshane '91—P. Rare—*Fl. NE.*
40 L'derry Kilrea '94—P. Lough Foyle, D. Moore—*Fl. NE.*

A calcifuge plant, but sometimes on limestone, as in the Aran Isles. Local, even on non-calcareous soils.

Galeopsis Ladanum L. Hemp-Nettle (genus).

Census 7+(2)—East 6+(2), Centre 1, West 0.

(5 Cork E. Little I. '54–6, Sullivan—*Cyb.* II. Not seen since).
11 Kilkny. Bellevue and Freshford, S. Madden—*Cyb.* I.
(12 Wexford Caim, one plant—Moffat '89 *552*).
19 Kildare Ballitore, Carroll; Straffan, Douglas—*Cyb.* I.
20 Wicklow Fassaroe (Barrington)—More '72 *614*. Greystones, D. Moore—*Cyb.* I.

The above records are placed under the aggregate species, as it is not known which segregate they refer to.

Galeopsis intermedia Vill.

14 Queen's Emo '96—P.
22 Meath Bective '96—P.

Galeopsis angustifolia Ehrh.

13 Carlow Bagenalstown '99, Milford, Carlow—P.
14 Queen's Abbeyleix '98, Maryborough '96—P.
19 Kildare Leixlip '96—P.
20 Wicklow Kilmacanoge '94—P.
21 Dublin Skerries '00—P. Not infrequent—Colgan.
22 Meath Kilmessan, Enfield, Laytown, Drogheda, '96—P.

G. angustifolia is the prevailing Irish plant, but possibly *G. intermedia* is not so rare as would appear. Excepting the Cork occurrence, which was apparently casual, the aggregate species has a continuous range confined to the province of Leinster.

Galeopsis versicolor Curt.

Census 17+(3)—East 8+(3), Centre 4, West 5.

(5	Cork E.	Near Midleton—Allin *Fl.* '83. A casual—Phillips).
11	Kilkny.	Kilkenny, S. Madden—*Cyb.* I.
12	Wexford	Ferns, common in one field, '95—G. E. J. Greene!
13	Carlow	Killedmond '98—P.
14	Queen's	Maryborough '96—P.
16	Galw. W.	Near Foxford ['64], More—*Cyb.* I.
(21	Dublin	Glasnevin (Underwood)—Mackay '25 *522*. Not since).
22	Meath	Cruicetown '97—P.
26	Mayo E.	Callow '00—P.
27	Mayo W.	Pontoon '00—P.
28	Sligo	Annaghmore '00—P. Near Sligo, J. Wynne—*Cyb.* I.
31	Louth	Ardee '97—P. Termonfeckin, Tullyesker—*Cyb.* I.
32	Monaghn.	Bessmount, Miss Maffett—*Cyb.* I.
34	Dongl. E.	†River Swilly, &c.: throughout, frequent—*Fl. Don.*
35	Dongl. W.	†Horn Head, &c.: north and south, frequent—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles.
(37	Armagh	Tanderagee, C. O'Meara—*Cyb.* I. Not there now—P.)
38	Down	Conlig '93—Stewart. Very rare—*Fl. NE.*
39	Antrim	Cushendall '90—P. Rare—*Fl. NE.*
40	L'derry	Eglinton '94—Mrs. Leebody! Rare—*Fl. NE.*

A plant of rather uncertain appearance, particularly partial to potato fields. A few doubtful early records are omitted, and modern confirmation of its occurrence in 21 and 37 is desirable. Chiefly off the limestone, and becoming frequent in Donegal only.

Galeopsis Tetrahit L.

Divisions all. Locally abundant. More plentiful off than on the limestone.

Lamium amplexicaule L. Henbit.

Census 23—East 13, Centre 4, West 6.

1	Kerry S.	‡Blaskets '80—Barrington *107*.
3	Cork W.	Crookhaven '96: rare, and south only—Phillips.
4	Cork Mid	Robert's Cove (Carroll)—Allin *Fl.* '83. Rare—Phillips.
5	Cork E.	Ballycroneen '98: rare—Phillips.
9	Clare	Muckinish '95—Colgan.
12	Wexford	Baginbun Head—B. & M. '92 *102*. Saltees '82—*384*.
13	Carlow	Carlow '00—Phillips.

14	Queen's	Maryborough '93—P.
19	Kildare	Kilkea Castle (Douglas)—More '72 *614*.
20	Wicklow	Abundant on the Murrough, D. Moore—*Cyb.* I.
21	Dublin	Skerries '00 : rare—Colgan.
22	Meath	Navan, Oldcastle, Mornington, '96—P.
24	Longfd.	Newtowncashel '00—P.
26	Mayo E.	Foxford ['64], More—*Cyb.* I.
28	Sligo	Cliffony ['82] (Corry *MS.*)—B. &. V. *112*.
31	Louth	Dunleer '00, Dundalk, Louth, Greenore—P.
34	Dongl. E.	Greencastle '93—P. *721*. †North only, rare—*Fl. Don.*
35	Dongl. W.	†Dunfanaghy, &c. : north only, rare—*Fl. Don.*
36	Tyrone	By Lough Neagh '96—Miss Knowles.
37	Armagh	Loughgall, Slieve Gullion, &c. : rare, '92—P.
38	Down	Killough '92—P. Rare—*Fl. NE.*
39	Antrim	Craigbilly '00—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Dungiven '93—Mrs. Leebody. Lough Foyle—*Cyb.* I.

Lamium intermedium Fr. Dead-Nettle (genus).

Census 20—East 7, Centre 6, West 7.

4	Cork Mid	Inniscarra '96—Phillips.
7	Tipp. S.	Cahir and Bansha '00—Phillips.
8	Limrck.	Foynes '99—Somerville. Mungret; Corbally; Doonass.
10	Tipp. N.	Roscrea '00—Phillips.
15	Galw. SE.	Gort and Loughrea '00—Phillips.
17	Galw. NE.	North of Tuam '99—P.
20	Wicklow	Near Davistown '81—Hart *371*.
21	Dublin	Rush! '00 : rare—Colgan.
24	Longfd.	Ballymahon, Castlerea, '00—P. Lanesborough—*113*.
26	Mayo E.	East of Foxford '00—P.
27	Mayo W.	Mallaranny '99—Marshall. Ballina '00—P.
28	Sligo	Mullaghmore, Syme—*Fl. Ulst.* '64. Ben Bulben—*93*.
29	Leitrim	Near Kinlough '84—B. & V. *112*.
34	Dongl. E.	Ballyliffan '93—P. *721*. North only, local—*Fl. Don.*
35	Dongl. W.	Dunfanaghy, &c. : north only, local—*Fl. Don.*
36	Tyrone	Newtownstewart '96—Miss Knowles.
37	Armagh	Maghery '92—P. Armagh (Johnson!)—P. *701*.
38	Down	Downpatrick '98—P. Common—*Fl. NE.* and *874*.
39	Antrim	Ballycastle '97—P. Common—*Fl. NE.*
40	L'derry	Magilligan '95—P. Frequent along the coast.

Chiefly in the north.

Lamium purpureum L.

Divisions all. Frequent.

Lamium hybridum Vill.

Census 21—East 9, Centre 4, West 8.

1	Kerry S.	Caragh Lake '00: rather frequent—Scully.
2	Kerry N.	Ballybunnion '99: rather frequent—Scully.
3	Cork W.	Timoleague '97: frequent in the south—Phillips.
4	Cork Mid	Near Cork '98: rare—Phillips.
5	Cork E.	Castletownroche '00: frequent—Phillips.
7	Tipp. S.	Fethard and Thurles '00—Phillips.
12	Wexford	East of Wexford '97—Marshall *539*. Rare and local.
14	Queen's	Maryborough '00—Phillips.
15	Galw. SE.	Gort '00—Phillips.
17	Galw. NE.	Dunmore '00—P.
19	Kildare	Ballymore '00—P.
21	Dublin	Howth '94—Colgan. Balbriggan '94—P.
24	Longfd.	Lough Gowna and below Drumsna '00—P.
29	Leitrim	Rinn Lough '99—P.
34	Dongl. E.	Stroove and Malin—*Fl. Don.*
35	Dongl. W.	Dunfanaghy, &c.: extreme north only—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles.
37	Armagh	Portadown '00—J. H. Davies!
38	Down	Glasdrumman ['89]—S. & P. *873*.
39	Antrim	Cullybackey '99—Miss Knowles. Rare—*Fl. NE.*
40	L'derry.	Salterstown, &c., D. Moore: rare—*Fl. NE.*

A rare plant apparently; chiefly in the north and south. A few old records of doubtful value are omitted.

Lamium album L. White Dead-nettle.

Census 23+(3)—East 12+(2), Centre 8, West 3+(1).

(3	Cork W.	Near Enniskeane '97, casual—Phillips.)
(4	Cork Mid	*Blackrock, Douglas—*Cyb.* I., II. Outcasts—Phillips.)
(5	Cork E.	*Great Island (Scott)—Power *Fl.* '45. Outcast—Phillips.)
6	Waterfd.	Dunmore East—Miss I. Horne '00.
11	Kilkny.	Odogh, S. Madden—*Cyb.* I.
12	Wexford	Enniscorthy '98—P. Ferns—*Cyb.* II. Monart—*552*.
14	Queen's	Maryborough '96—P.
15	Galw. SE.	Portumna '98—P.

18	King's	Clara '99, Edenderry '96—P.
19	Kildare	Kildare '97—P. Frequent.
20	Wicklow	Bray (Barrington)—More '72 *614*.
21	Dublin	Rush '00: frequent—Colgan.
22	Meath	Navan '00: frequent throughout—P.
23	Westmth.	Mullingar '97—Carr. Widespread, local—P.
24	Longfd.	Ballymahon '00, Granard, Finnea—P.
25	Roscomn.	Boyle '97, Athlone—P. Ballybay—B. & V. *113*.
28	Sligo	Near Sligo, J. Wynne—*Cyb.* I.
30	Cavan	Cavan '96, Mount Nugent, Finnea—P.
31	Louth	Dundalk '00—Mrs. Swan. Common—P.
32	Monghn.	Castleblayney '00—Somerville. Frequent.
34	Dongl. E.	*Kilderry, W. E. Hart—*Fl. Don.*
36	Tyrone	Dungannon '96—Miss Knowles. Winey—*Cyb.* I.
37	Armagh	Crossmaglen '92, and locally common in north—P. *701*.
38	Down	Downpatrick '91—P. Frequent—*Fl. NE.*
39	Antrim	Cullybackey '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Limavady '95—B.N.F.C. *130*. Rare—*Fl. NE.*

Chiefly along the east side of Ireland, from Kildare to Derry.

Lamium Galeobdolon Crantz. Yellow Archangel.

Census 3+(1)—East 3, Centre (1), West 0.

12	Wexford	Near Enniscorthy, J. Morrison—*Cyb.* I.
20	Wicklow	Dargle '96, Scully—*Cyb.* II. Powerscourt—*522*.
21	Dublin	Tymon Castle '00: rather rare—Colgan.
(23	Westmth.	Lough Ennel, Foot—*Cyb.* I. ? Not there now.)

Chiefly in the southern half of county Dublin. Confirmation of the Wexford station is desirable. The Westmeath station should probably be expunged.

‡**Ballota nigra** L. Black Horehound.

Census 23—East 13, Centre 7, West 3.

3	Cork W.	*Near Moragh Lake (C. Longfield)—Phillips.
4	Cork Mid	‡Carrigaline '00 (Scully): rare—Phillips.
5	Cork E.	†Lahard '98: rare—Phillips.
6	Waterfd.	Co. Waterford, Carroll—*Cyb.* I.
7	Tipp. S.	Near Clonmel—Miss S. Grubb '00.
10	Tipp. N.	Dromineer '00—Phillips.
11	Kilkny.	Odogh, S. Madden—*Cyb.* I.
12	Wexford	Rosslare '82—Hart *384*.
14	Queen's	†Maryborough '93—P.

18 King's ‡Edenderry '96—P.
19 Kildare ‡Nurney '97—P. Rather frequent.
20 Wicklow ‡Bray '94—P. Murrough, D. Moore—*Cyb.* I.
21 Dublin †Skerries '00 : rare—Colgan.
22 Meath †Bective '96 : throughout—P.
23 Westmth. Tourin (Miss E. Reynell)—Levinge '94 *484*.
26 Mayo E. Ballinrobe '91—Mrs. Persse !
30 Cavan Belturbet, D. Moore—*Cyb.* I.
31 Louth †Dundalk '96 : frequent throughout—P.
34 Dongl. E. *Tullagh '98—Hart *405*. *Fahan—*Fl. Don.*
35 Dongl. W. *Near Salt Hill—*Fl. Don.*
38 Down Coney Island '98—Davies *265*. †Rare—*Fl. NE.*
39 Antrim Randalstown '99—Miss Knowles. † Rare—*Fl. NE.*
40 L'derry Coleraine, an escape, D. Moore—*Cyb.* II.

An escape from cultivation at best, but quite naturalized.

Teucrium Scordium L. Water Germander.

Census 7+(1)—East 0, Centre 4+(1), West 3.

(8 Limrck. Shannon near Limerick—K'Eogh 1735 *443*.)
9 Clare Rineacrush Point on Lough Derg '96 — Colgan. Glanquin (O'Kelly)—Levinge *482*.
10 Tipp. N. Derry Island to Ryan's Point on Lough Derg, abundant, '96—Colgan *219*.
15 Galw. SE. Portumna '00—Phillips. C. on L. Derg '96—Colgan.
23 Westmth. Hare Island '99 : abundant on Lough Ree—P.
24 Longford Below Roosky '00, and abundant on Lough Ree—P.
25 Roscomn. Galey '97—P. Abundant on Lough Ree.
29 Leitrim Shannon below Roosky '00—P.

Confined to the Shannon, except for the Glanquin station in Clare. Confirmation of the old Limerick record is very desirable.

Teucrium Scorodonia L. Wood Sage.

Census 38—East 14, Centre 12, West 12.

Divisions all, *except 22 Meath, 23 Westmeath.* A peculiarly distributed plant. It is usually calcifuge in a marked degree, appearing in quantity the moment the limestone is left, and in many divisions is strictly confined to the non-calcareous rocks ; but in other places it occurs abundantly on bare limestone " crags " and on limestone cliffs. Local in many divisions : rare in 10, 18, 24, 25, 30, 33; common in 3, 4, 5, 6, 13, 15, 16, 20 and 34 to 40.

Ajuga reptans L. Bugle.

Divisions all. Common.

Ajuga pyramidalis L.

9 Clare Ballyryan abundant '95, O'Kelly—B.E.C. '95 *162*. Poulsallagh '93, Dr. Leitch—*Cyb.* II. Inishmore '93—Colgan *203*.

Plantago major L. Way-bread; Plantain (genus).

Divisions all. Common.

***Plantago media** L. Lamb's-tongue.

Census 14—East 8, Centre 2, West 4.

4 Cork Mid *Douglas and Bessborough—Allin *Fl.* '83.
5 Cork E. *Fota '95—Phillips.
9 Clare Lisdoonvarna '00—Miss Knowles. North, rare.
11 Kilkny. Rough bank near Lismaine House '99—P.
12 Wexford Killanne '00 (Miss Cooper)—Moffat *559*.
16 Galw. W. Cong, Miss Jackson—*Cyb.* II.
19 Kildare Near Straffan (J. Douglas)—More '72 *614*.
21 Dublin Kingstown '00—P. Malahide, Hart—*Fl. Don.*
26 Mayo E. Lisloughrey, Miss Jackson; Hollymount—*Cyb.* I., II.
28 Sligo Roadside near Cliffony '00—P.
35 Dongl. W. Ramelton (the Misses Kinahan), Glenalla—*Fl. Don.*
36 Tyrone Cookstown '96—Miss Knowles. Dungannon—*Cyb.* II.
39 Antrim Ballymena '00—Miss Knowles. Rare.
40 L'derry Bellarena '97 (Mrs. Leebody)—P. *774*.

Introduced in all cases, but often on wild ground, and seems to be spreading in Ireland.

Plantago lanceolata L. Ribwort.

Divisions all. Common.

Plantago maritima L.

Maritime and sub-maritime divisions all, including Kilkenny, Tyrone, and Armagh. Common on the whole coast. Inland in the following divisions:—

10 Tipp. N. Dromineer! '00—Phillips.
15 Galw. SE. Garryland '00—P. Castle Taylor—More *598*.
16 Galw. W. Whole east margin c. '99—P. On the mountains v. r.
17 Galw. NE. Common in western half '00—P.

26 Mayo E. Claremorris '00—P. Common except in the east.
27 Mayo W. Lough Conn abundant '00—P. F. on the mountains.
28 Sligo Collooney hills '00—P. Ben Bulben '82—Corry *248*.
34 Dongl. E. Brown Hall district common—*Fl. Don.*
35 Dongl. W. Breaghy: on the mountains occasionally—*Fl. Don.*
40 L'derry Carntogher, &c., to 1500 feet, D. Moore—*Cyb.* I.

These inland stations divide themselves into two groups: (*a*) Low-level limestones (10, 15, 16, 17, 26, 27, 34); and (*b*) mountains (16, 27, 28, 35, 40). Excepting the Derry stations, all lie in the west of Ireland.

Plantago Coronopus L. Buck's-horn.

Maritime and sub-maritime divisions all, namely, 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16, 17, 20, 21, 22, 27, 28, 29, 31, 34, 35, 36, 37, 38, 39, 40. Common round the whole coast.

Littorella lacustris L. Shore-weed.

Census 35—East 10, Centre 13, West 12.

Divisions all, *except 12 Wexford, 13 Carlow, 18 King's, 21 Dublin, 31 Louth.* Frequent, but somewhat local.

Scleranthus annuus L. Knawel.

Census 16—East 10, Centre 2, West 4.

3 Cork W. Dunmanway '00: rare—Phillips.
4 Cork Mid Blarney (R. Mills)—Allin *Fl.* '83. Rare—Phillips.
5 Cork E. Great Island, Rathpeacon, Cove—Power *Fl.* '45.
8 Limrck. Castleconnell '00—R. D. O'Brien!
11 Kilkny. Ullard '96—T. Hartley.
16 Galw. W. Oughterard '99—P.
20 Wicklow Murrough—*Guide* '78.
21 Dublin Glenasmole '00—Colgan. Very rare.
27 Mayo W. Near Levally Lough '00—P.
31 Louth Ballymascanlan '00—P. Omeath—Hart *381*. Collon.
32 Monaghn. Lough Avaghon '00—P.
35 Dongl. W. Near Kindrum '98—Hart *405*. Fanet v. r.—*Fl. Don.*
37 Armagh Frequent throughout '92—P.
38 Down Newcastle '97—P. Frequent—*Fl. NE.*
39 Antrim Bushfoot '94—Mrs. Swan. Frequent—*Fl. NE.*
40 L'derry Enagh Lough '96—Mrs. Leebody. Frequent—*Fl. NE.*

Strongly calcifuge, and distributed accordingly, but becomes frequent only in the north-east.

Chenopodium album L. Goose-foot (genus).

Divisions all. Common.

Chenopodium rubrum L.

Census 12 + (3)—East 5 + (3), Centre 2, West 5.

1	Kerry S.	Derrymore on Tralee Bay '88—Scully.
2	Kerry N.	Ballybunnion '94: rare—Scully.
(4	Cork Mid	Glasheen—Power *Fl.* '45. Error or casual—Phillips.)
5	Cork E.	Kilcoleman (Allin)—More '72 *614*. Spike I.—*Cyb.* I.
8	Limrck.	Lough Gur '00—P. ‡Limerick! '00—R. D. O'Brien.
9	Clare	Inishmore '95—P.
12	Wexford	Rosslare '96—Marshall *537*. Frequent on south coast.
15	Galw. SE.	Newtown near Gort '94, P. B. O'Kelly—*Cyb.* II.
17	Galw. NE.	Ballyloughaun '99—P.
21	Dublin	Near Tallaght '00: rare—Colgan.
22	Meath	Drogheda and Boyne mouth '96—P.
23	Westmth.	Lough Deravaragh and Lough Drin '95—Levinge *486*.
31	Louth	Baltray '96—P.
(38	Down	Holywood—*Fl. Belfast.* '63. Ballyhalbert. ? Extinct.)
(39	Antrim	Belfast, Templeton—*Fl. NE.* Extinct).

***Chenopodium Bonus-Henricus** L. Allgood.

Census 30—East 13, Centre 7, West 10.

1	Kerry S.	Kenmare '99: rare and local—Scully.
2	Kerry N.	Killarney '96—Scully.
3	Cork W.	Near Bandon '97: rare—Phillips.
4	Cork Mid	Ovens '96: rare—Phillips.
5	Cork E.	Castletownroche & Carrigtwohill '00: rare—Phillips.
7	Tipp. S.	Fethard '00—Phillips. Frequent—P.
8	Limrck.	L. Gur '00—P. Patrick's Well, Bentley—*Hb.* L.F.C.!
9	Clare	Doonbeg '99—Miss Knowles. Ballyvaughan; Tullagh.
11	Kilkny	Near Jenkinson House '99—P.
12	Wexford	Enniscorthy '98—P. Rather frequent.
15	Galw. SE.	Castle Taylor—More '55 *598*.
18	King's	Clara '99, Shannon Harbour '98—P.
19	Kildare	Athy '99—P.
20	Wicklow	Newtownmountkennedy '94—P. Rare.
21	Dublin	Balrothery '00: rare—Colgan.
22	Meath	Beauparc '00: frequent—P.

23	Westmth.	Near Multyfarnham—Levinge '94 *484*.
24	Longfd.	Granard and Ballymahon '00—P.
26	Mayo E.	Neale, and near Ballinrobe, Miss Jackson—*Cyb.* II.
27	Mayo W.	Killala '00—P.
28	Sligo	Ballysadare '99, Strandhill '97—P.
29	Leitrim	Jamestown '99—P. Kinlough—B. & V. *112*.
31	Louth	Dundalk '96 : frequent throughout—P.
34	Dongl. E.	Pluck, &c. : throughout, rare—*Fl. Don.*
35	Dongl. W.	Ramelton, Killybegs : rare—*Fl. Don.*
36	Tyrone	By Lough Neagh '96 : rare—Miss Knowles.
37	Armagh	Lough Ross '92—P. Benburb bridge—*Fl. Ulst.*
38	Down	Downpatrick, Hyndman—*Fl. Ulst.* Rare—*Fl. NE.*
39	Antrim	Cullybackey '00—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Kilrea '94—Mrs. Leebody. Rare—*Fl. NE.*

Generally on roadsides, and near houses. In all cases derived from cultivation.

Beta maritima L. Sea-Beet.

Census 24—East 13, Centre 1, West 10.

1	Kerry S.	Derrynane '00 : frequent—Scully.
2	Kerry N.	Ballybunnion '94 : frequent—Scully.
3	Cork W.	Bantry '98 : common on the coast—Phillips.
4	Cork Mid	Crosshaven '00 : common near the sea—Phillips.
5	Cork E.	Youghal '00 : common near the sea—Phillips.
6	Waterfd.	Dungarvan '99 : frequent—P.
8	Limrck.	Foynes '85-6—Stewart *863*.
9	Clare	Moher '99—G. Fogerty ! Burren and Aran local.
11	Kilkny.	Ballinlaw and Snowhill '99—P.
12	Wexford	Wexford '97—Marshall. Frequent on south coast.
15	Galw. SE.	Kilcolgan and near Kinvarra '99—P.
16	Galw. W.	Inveran '95—Colgan. Galway '99—P.
17	Galw. NE.	Oranmore and Lough Atalia '99—P.
20	Wicklow	Kilcoole '94—P.
21	Dublin	Skerries '00 : frequent—Colgan.
22	Meath	Boyne mouth and Gormanstown '96—P.
28	Sligo	Near Mullaghmore, Syme—*Fl. Ulst.* '64.
31	Louth	Queensborough, Termonfeckin, Dundalk, '96—P.
34	Dongl. E.	Malin Head '98—Hart *405*. Coasts frequent—*Fl. Don.*
35	Dongl. W.	Whole coast frequent—*Fl. Don.*
37	Armagh	Newry '92—P.

38 Down Portaferry '00: local—P.
39 Antrim Fair Head '00—Mrs. Swan. Rare, and chiefly in N.
40 L'derry Downhill '94—Mrs. Leebody.

Rather local on the coast.

Atriplex littoralis L. Orache (genus).

Census 7—East 6, Centre 0, West 1.

4 Cork Mid Hop Island, Carroll—*Cyb.* I.
9 Clare Scattery I. '85—Stewart. Inishmore—Hart *365*.
12 Wexford Wexford '97—Marshall. S. coast f.—Hart *371*, *384*.
20 Wicklow Below Newtownmountkennedy, D. Moore—*Cyb.* I.
21 Dublin Sutton '00: rather rare—Colgan.
38 Down Holywood abundant '00—P. Rare—*Fl. NE.*
39 Antrim Whitehouse '86—P. Macedon and Kilroot, Stewart—*Fl. NE.*

Atriplex patula L.

Divisions all, *except 13 Carlow and 26 Mayo East*, in which it no doubt occurs. Common in its various forms.

Atriplex hastata L.

Census 22—East 12, Centre 3, West 7.

Divisions all, *except 1, 2, 7, 10, 13, 14, 16, 19, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33*. Rarer than the last, and apparently commoner on the coast than inland; but very possibly occurs in all divisions.

Atriplex Babingtonii Woods.

Census 24—East 12, Centre 1, West 11.

In most of the maritime divisions, namely:—1, 2, 3, 4, 5, 6, 8, 9, 12, 16, 17, 20, 21, 22, 27, 28, 29, 31, 34, 35, 37, 38, 39, 40. Probably common on the whole coast.

Atriplex farinosa Dum.

21 Dublin North Bull '00: local—Colgan.
22 Meath Boyne mouth '96—P.
31 Louth Baltray '96, Greenore—P. Lurgan Green—*Cyb.* II.
38 Down Ballykinler '00—Waddell. Frequent—*Fl. NE.*
39 Antrim Redbay '00—Miss Knowles. Rare—*Fl. NE.* and *874*.

Confined to the east coast, from Dublin Bay to Bengore Head.

Atriplex portulacoides L.

Census 11+(1)—East 2+(1), Centre 0, West 9.

1	Kerry S.	Between Dingle and Castlemaine Bay, D. Moore—*Cyb.* I.
(2	Kerry N.	Near Calnafersy—Smith 1756 *843*.)
4	Cork Mid	Between Currabinny and Ring '95, Scully—*Cyb.* II.
5	Cork E.	Youghal '00, Cork Beg, Ballycotton : rare—Phillips.
6	Waterfd.	Dungarvan '99—P. Tramore—Phillips. Helvick Hd.
9	Clare	West of Ballyvaughan '99—P. B. O'Kelly !
12	Wexford	Cahore Point '81—Hart *371*.
21	Dublin	Rogerstown '00 : locally abundant—Colgan.
22	Meath	Nanny and Boyne estuaries '96—P.
31	Louth	Dundalk ! '00—Mrs. Swan. Linns, Clogher, Boyne—P.
37	Armagh	Narrow-water '92—P.
38	Down	Narrow-water c. '97—P. Dundrum (R. Hanna)—*874*.

Ranges from Galway Bay round the south and east coasts to Dundrum Bay. Local.

Salicornia herbacea L. Glasswort.

Divisions 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16, 17, 20, 21, 22, 27, 28, 31, 34, 35, 37, 38, 39, 40. In all maritime and sub-maritime divisions, *except 29 Leitrim*. Common on the coast.

Suæda maritima Dum. Sea-Blite.

Distribution the same as the last, except that it is not recorded from *11 Kilkenny*.

Salsola Kali L. Saltwort.

Maritime divisions nearly all, namely :—1, 2, 3, 4, 5, 6, 9, 12, 16, 20, 21, 22, 27, 28, 31, 34, 35, 38, 39, 40. Common on sandy shores.

Polygonum Convolvulus L. Black Bindweed.

Divisions all. Common.

Polygonum aviculare L. Knot-grass.

Divisions all. Common.

Polygonum Raii Bab.

Census 18—East 10, Centre 0, West 8.

1	Kerry S.	Lehid '94 : local—Scully.
2	Kerry N.	Near Ballybunnion '90 : local—Scully.

3	Cork W.	Barley Cove '96 : rare—Phillips.
5	Cork E.	Youghal '00 : rare—Phillips.
6	Waterfd.	Bunmahon '99—P. Local on the coast.
9	Clare	Inishmore '95—P. Inishmaan ; Malbay ; Lehinch.
12	Wexford	Greenore and about Patrick's Bay '82—Hart *384*.
15	Galw. SE.	Near Ardfry House '99—P.
16	Galw. W.	Near Galway, Melville—*Cyb.* I.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.
21	Dublin	Near Balbriggan '00 : rare—Colgan.
22	Meath	Laytown, Gormanstown, Boyne mouth '96—P.
31	Louth	Dunany '96, Termonfeckin, Queensboro', Greenore—P.
34	Dongl. E.	White Strand Bay '93—P. Malin, Bundoran—*Fl. Don.*
35	Dongl. W.	Ballymastocker Bay '98—Hart *405*. Rare—*Fl. Don.*
38	Down	Tyrella '00—P. Frequent—*Fl. NE.*
39	Antrim	Redbay '90—P. Rare—*Fl. NE.* and *874*.
40	L'derry	Lough Foyle, D. Moore—*Cyb.* I.

Rare on the west coast, frequent on the east.

Polygonum Hydropiper L. Water-Pepper.

Divisions all, *except 18 King's Co., 19 Kildare.* Strongly calcifuge, and very local in the Central Plain.

Polygonum minus Huds.

Census 22—East 7, Centre 8, West 7.

2	Kerry N.	Killarney '90 : rare—Scully.
4	Cork Mid	Ballincollig castle (Carroll)—Allin *Fl.*'83.
7	Tipp. S.	Near Cahir, D. Moore—*Cyb.* I.
14	Queen's	Great Heath of Maryborough '96—P.
17	Galw. NE.	About Tuam—*Ir. Fl.* '33.
19	Kildare	Near Robertstown, D. Moore—*Cyb.* I.
20	Wicklow	Near Enniskerry, J. Ball—*Cyb.* I.
24	Longfd.	Lough Ree below Ballymahon '00—P.
25	Roscomn.	Lough Allen at Arigna '00—P.
26	Mayo E.	Lough Cullin, More—*Cyb.* I.
27	Mayo W.	Lough Conn '00—P. Lough Cullin, More—*Cyb.* I.
28	Sligo	Near Sligo, J. Wynne—*Cyb.* I.
29	Leitrim	Garadice Lough abundant '00—P.
30	Cavan	Lough Ramor abundant '96—P.
32	Monaghn.	Annaghmakerig Lough '00—P. Locally abundant.
33	Ferman.	Gubbaroe Point on L. Erne '81–2—Barrington *108*.

34 Dongl. E. Malin Well, Dickie—*Fl. Ulst.* '64.
35 Dongl. W. Between Gweedore and Dunglow, Dickie—*Fl. Ulst.* '64.
37 Armagh Scarva (Stewart), Clay L. and L. Neagh '92—P. *701*.
38 Down Hollymount '98—B.N.F.C. *137*. Rare—*Fl. NE.*
39 Antrim L. Neagh at Six-mile R. '00—Davies *272*. Whitehouse.
40 L'derry Coleraine, D. Moore—*Fl. Hib.* '36. Rare—*Fl. NE.*

Chiefly in the northern half of Ireland, where it is often abundant on stony lake-shores off the limestone. Recent confirmation for 4, 17, 19, 20, 28, 34, 35, 40 is desirable, as the plant has not always been correctly diagnosed.

Polygonum mite Schrank.

Census 4—East 2, Centre 1, West 1.

29 Leitrim Glenade '99—P.
30 Cavan Lough Ramor '96—P.
37 Armagh Raughlan Point on Lough Neagh '00—J. H. Davies.
39 Antrim Lough Neagh near Shane's Castle '00—J. H. Davies.

Possibly frequent in Ireland.

Polygonum Persicaria L. Persicaria.

Divisions all. Common.

Polygonum lapathifolium L.

Census 33—East 11, Centre 11, West 11.

Divisions all, *except 6, 9, 11, 12, 14, 19, 23*. Probably universal.

Polygonum maculatum Trimen and Dyer.

Census 4+(2)—East 3+(2), Centre 1, West 0.

4 Cork Mid Ballincollig '53 (Carroll), *Hb.* Babington—*Cyb.* II.
(11 Kilkny. Rubbish-heap at Ferrybank '95—Marshall.)
(12 Wexford Wexford quay " mere casual " '96—Marshall *537*.)
13 Carlow Goresbridge '99—P.
23 Westmth. Lough Deravaragh near Knock Body '95—Levinge *486*.
38 Down Dundrum '94—Waddell *896*.

Not distinguished in Ireland, and range unknown.

Polygonum amphibium L.

Divisions all. Common.

***Polygonum Bistorta** L. Snakeweed.

Census 17—East 7, Centre 4, West 6.

2 Kerry N. Near Tralee—Smith 1756 *843*.
3 Cork W. Near Bantry (Miss Hutchins)—Mackay '25 *522*.
6 Waterfd. Hill of Slatwood—Smith 1746 *844*.
8 Limrck. Ballingarry, Mrs. Gubbins—*Cyb.* I.
13 Carlow St. Mullin's '00—T. Hartley.
14 Queen's S. of Mageney '84—Hart *383*. Stradbally—*192*.
15 Galw. SE. Banks of the Suck near Ballinasloe '65—Foot *328*.
21 Dublin Near Monkstown—Mackay '25 *522*.
28 Sligo South of Sligo, Dickie—*Fl. Ulst.* '64.
33 Ferman. Ely Lodge '81-2—Barrington *108*.
34 Dongl. E. Castlewray, Dean Gwynn—*Fl. Don.*
35 Dongl. W. Reelan Water '89—Mrs. Leebody. Killygordon.
36 Tyrone Near Milltown, Admiral Jones—*Cyb.* I.
37 Armagh Ardmore Glebe (Lett !)—P. '92 *701*.
38 Down Saintfield and Knock '95—Waddell *896*. Rare—*Fl. NE.*
39 Antrim Ballymena '00—Miss Knowles. Rare—*Fl. NE.*
40 L'derry Near Moneymore, D. Moore—*Cyb.* I.

A relic of cultivation, apparently rarer now than formerly.

Polygonum viviparum. L.

1 Kerry S. Brandon '83—Hart *381*.
28 Sligo Ben Bulben '84—B. & V. *112*. Ben Whisken '82 (Dickson)—Corry *248*.
35 Dongl. W. Bulbein Mount and Slieve League—*Fl. Don.*

Oxyria digyna Hill. Mountain Sorrel.

Census 8—East 0, Centre 1, West 7.

1 Kerry S. Glanbehy mountains '92—Scully. Reeks & Brandon f.
2 Kerry N. Mangerton '92 : rare, and in south only—Scully.
7 Tipp. S. Muskry Lough '00—P. Galtees, locally abundant.
16 Galw. W. Muckanaght '98—Colgan. Maamtrasna—M. & S. *545*.
27 Mayo W. Cushcamcarragh '99—Colgan. Rare.
28 Sligo Ben Bulben '00—West. F. on Ben Bulben range.
29 Leitrim Glenade '99—P.
35 Dongl. W. Slieve Snaght West '85—Colgan. Poisoned Glen, Slieve League—*Fl. Don.*

Absent from the eastern mountains.

Rumex conglomeratus Murr. Dock (genus).

Divisions all. Common.

Rumex nemorosus Schrad.

Divisions all. Common.

Rumex maritimus L. Golden Dock.

5 Cork E. Kilcoleman (Allin, Carroll)—More '72 *614*, & Allin *Fl.*
8 Limrck. Lough Gur! '00—Canon O'Brien.
12 Wexford Lady's Island Lake '82—Hart *384*.
(21 Dublin Garristown '83, Hart—*Fl. Howth.* ? Extinct—Colgan.)

The Youghal record is dubious; the Ballycotton record an error.

†Rumex pulcher L. Fiddle Dock.

Census 3+(4)—East 2+(3), Centre (1), West 1.

3 Cork W. †Baltimore '97, Cape Clear '96—Phillips.
(4 Cork Mid Friar's Walk—Mackay '25 *522*. Gone now—Phillips.)
5 Cork E. †Youghal, Cork Beg, Whitegate, '00—Phillips.
6 Waterfd. †East of Dungarvan '99—P.
(10 Tipp. N. Nenagh, one plant, '00—Phillips.)
(20 Wicklow Bray '67–'72—More *614*.)
(21 Dublin Baldoyle sparingly '68—More *614*. Very rare.)

Established along the southern coast; elsewhere apparently not permanent. Perhaps an introduction in all cases.

Rumex obtusifolius L.

Divisions all. Common.

Rumex crispus L. Curled Dock.

Divisions all. Common.

Rumex Hydrolapathum Huds. Great Water-Dock.

Census 35—East 14, Centre 12, West 9.

1 Kerry S. Castlegregory '94—Scully.
3 Cork W. Castlefreke '91 : rare—Phillips.
4 Cork Mid About Kinsale and Bandon—Smith 1750 *841*.
5 Cork E. Power Head '99 : rare—Phillips.
6 Waterfd. Clonea '99—P. And along the Blackwater.

7	Tipp. S.	E. of O'Brien's Bridge (C. B. Barrington)—Hart '81 *369*.
8	Limrck.	Lough Gur and Castleconnell '00—P.
9	Clare	Dromoland '98—W. de V. Kane. Shannon, rare.
10	Tipp. N.	Youghal Bay '99, Portumna '97—P.
11	Kilkny.	Kilkenny '00—Phillips. Nore and Barrow, rather rare.
12	Wexford	Courtown '96—P. Rather frequent in the south.
13	Carlow	Bagenalstown '99, c. on Barrow—P. Slaney—*371*.
14	Queen's	Between Athy and Carlow '84—Hart *383*.
15	Galw. SE.	Portumna, Ballinasloe, below Woodford, '98—P.
17	Galw. NE.	Near Clonbrock '96—P.
18	King's	Banagher '98—P.
19	Kildare	Barrow below Athy '99—P. Below Monasterevan—*383*.
20	Wicklow	Plentiful on the Murrough, D. Moore—*Cyb.* I.
21	Dublin	Near Fieldstown '94 : very rare—Colgan.
22	Meath	Navan '00 : throughout, but not common—P.
23	Westmth.	Lough Iron '99—P. Centre and west, sparingly.
24	Longfd.	Lough Forbes '00, and frequent on Lough Ree—P.
25	Roscomn.	Rockville '99 : throughout, not common—P.
27	Mayo W.	Westport '36—Babington *54*.
28	Sligo	Ballysadare '00, Lough Arrow '97—P.
29	Leitrim	Rinn Lough and Leitrim '99—P.
30	Cavan	Lough Oughter and Farnham '96—P.
31	Louth	Braganstown '00, Kerney's Cross, Ardee—P.
32	Monaghn.	Rockcorry '00—P.
33	Ferman.	Enniskillen '00—P.
34	Dongl. E.	River Erne above Ballyshannon—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
38	Down	Downpatrick abundant '00—P. Rare—*Fl. NE.*
39	Antrim	Antrim ! '86—D. Redmond. About L. Neagh only, r.
40	L'derry	Ballymacpeak, Ferguson—*Fl. Ulst.* '64. Portglenone —Wade *902*.

Rumex Acetosa L. Sorrel.

Divisions all. Common.

Rumex Acetosella L. Sheep's Sorrel.

Divisions all. Abundant. Calcifuge.

***Hippophae rhamnoides** L. Sea Buckthorn.

12 Wexford Ardamine on cliffs '97—Marshall *539*. Courtown sandhills v. c. '96—P. Raven Point—More *614*.

21 Dublin Spreading on Rush sandhills '93, Colgan—*Cyb.* II.

Thoroughly naturalized on the Wexford coast, and becoming so in Dublin. Planted also in Kerry (1 and 2), where it will perhaps spread similarly.

(**Euphorbia Peplis** L.)

6 Waterfd. Garraris Cove '59, *Hb.* Mackay—*Cyb.* II.

Searched for repeatedly in recent years without success.

Euphorbia Helioscopia L. Sun Spurge.

Divisions all. Common.

Euphorbia hiberna L. Irish Spurge.

Census 11—East 3, Centre 1, West 7.

1 Kerry S. Kenmare '00 : c., but r. in Dingle peninsula—Scully.
2 Kerry N. Listowel '99 : common, less so in the north—Scully.
3 Cork W. Cape Clear '96 : common—Phillips.
4 Cork Mid Donoughmore '96 : common—Phillips.
5 Cork E. Fermoy '00 : SW. c., r. elsewhere—Phillips.
6 Waterfd. Ballyduff '00—Phillips. Dungarvan—J. Britten, in Hart *388*. Cappoquin, R. Nier, Miss Grubb—*Cyb.* I.
8 Limrck. Abbeyfeale c. '90—Scully *827*. Adare, More—*Cyb.* II.
15 Galw. SE. Owendalulleegh R. c. '00—P. Derryea—Hart *364*.
27 Mayo W. Inishturk '75—More *616*.
34 Dongl. E. Dunree River '91 (J. Hunter)—Hart *394*.
35 Dongl. W. Poisoned Glen '67 (N. Moore)—More *614*.

The Slieve Bane (Roscommon) record is doubtful : the plant does not appear to grow there now. South of Ireland, with outlying stations along the west coast to Donegal.

†**Euphorbia amygdaloides** L. Wood Spurge.

3 Cork W. Near Kinsale—Allin '74 *17*. Castle Bernard—*287*.
4 Cork Mid Oyster Haven '00 (Scully)—Phillips. Dunderrow.
35 Dongl. W. Glenalla woods, very rare—*Fl. Don.*

Thoroughly naturalized, if not native, in Co. Cork.

Euphorbia Paralias L. Sea Spurge.

Census 15—East 9, Centre 0, West 6.

1 Kerry S. Rossbehy '00 : local—Scully.

2	Kerry N.	Banna '92: local—Scully.
3	Cork W.	Barley Cove '96: frequent—Phillips.
5	Cork E.	Near Youghal '00: rare—Phillips.
6	Waterfd.	Tramore! '99—Phillips. Near Whiting Bay—Hart *384*.
9	Clare	Fanore '99—G. Fogerty! Burren and Aran rare.
12	Wexford	Rosslare '97—Marshall. Whole coast frequent.
16	Galw. W.	Inveran '95—Colgan. Near Galway '99—P.
20	Wicklow	Brittas Bay '96—P. Coast common.
21	Dublin	North Bull! '00: frequent—Colgan.
22	Meath	Laytown and Mornington '96—P.
31	Louth	Greenore '00, Dromiskin, Baltray—P.
35	Dongl. W.	Fanet '91—*Fl. Don.*
38	Down	Tyrella '00—P. Frequent—*Fl. NE.*
39	Antrim	Bushfoot '68—B.N.F.C. *117*.

Sandy shores, rather local, and rare in the west.

Euphorbia portlandica L.

Census 17—East 10, Centre 0, West 7.

1	Kerry S.	Derrynane '00: rather frequent—Scully.
2	Kerry N.	Ballyheige '92: rather rare—Scully.
3	Cork W.	Baltimore '97: frequent—Phillips.
4	Cork Mid	Crosshaven '00: frequent—Phillips.
5	Cork E.	Youghal '00: frequent—Phillips.
6	Waterfd.	Tramore '97—Mrs. Persse!
9	Clare	Fanore '00—Miss Knowles. Fort Fergus—West. Aran.
12	Wexford	Rosslare '97—Marshall. Frequent.
16	Galw. W.	Near Slyne Head '96—P.
20	Wicklow	S. of Wicklow '00—C. Waterfall. Locally abundant.
21	Dublin	Portrane '00: rare—Colgan.
22	Meath	Boyne mouth '94—P.
31	Louth	Queensborough '96—P.
34	Dongl. E.	Bundoran '00—Tetley. Binnion—*405*. N. and S., r.
35	Dongl. W.	Sessiagh Bay '98—Hart *405*. North only, r.—*Fl. Don.*
38	Down	Ballykinler '00—P. South only, frequent.
39	Antrim	Portrush '99—Miss Knowles. Bushfoot '87—P.

East coast frequent, west coast rare.

Euphorbia Peplus L.

Divisions all. Common.

Euphorbia exigua L.

Census 31—East 15, Centre 9, West 7.

3	Cork W.	Dunmanway '00: frequent—Phillips.
4	Cork Mid	Crosshaven '00 (Scully): frequent—Phillips.
5	Cork E.	Midleton '00: common—Phillips.
6	Waterfd.	Tramore '99—P. Carrickbeg '00—Phillips.
7	Tipp. S.	Cahir '00: frequent—P.
8	Limrck.	Hollypark '00—O'Brien! Foynes '99—Somerville.
9	Clare	Ballyvaughan '95—Colgan.
10	Tipp. N.	Dromineer '00—Phillips. Cloughjordan, L. Ourna—P.
11	Kilkny.	Thomastown '98—P. Frequent in centre and south.
12	Wexford	Enniscorthy '98—P. Throughout; common in south.
13	Carlow	Goresbridge '99, Carlow, Milford, Borris—P.
14	Queen's	Emo '96—P.
15	Galw. SE.	Ardrahan '00—Phillips. Common in SW.—P.
16	Galw. W.	Ross Lake and Kilbeg ferry '99—P.
17	Galw. NE.	Keekill: common in SW. '99—P.
18	King's	Tober '99, Banagher, Edenderry—P.
19	Kildare	Kildare '98: frequent—P.
20	Wicklow	South of Bray Head '86—P.
21	Dublin	Portrane '00: rare—Colgan.
22	Meath	Oldcastle '96—P.
24	Longfd.	Newtowncashel abundant '00—P.
25	Roscomn.	Ballinasloe and Athlone '99—P. Frequent in the south.
30	Cavan	Mount Nugent '96—P.
31	Louth	Greenore '00, Braganstown, Ardee—P.
34	Dongl. E.	‡Greencastle, W. E. Hart; Inch—*Fl. Don.*
35	Dongl. W.	‡Carraghblagh: north only, rare—*Fl. Don.*
36	Tyrone	Cookstown '96—Miss Knowles.
37	Armagh	Frequent throughout '92—P.
38	Down	Ardglass '98—Davies *265*. Frequent—*Fl. NE.*
39	Antrim	Ballymena '00—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Ballyscullion '94—Mrs. Leebody. Frequent.

Local, and rare on the west coast.

Mercurialis perennis L. Dog's Mercury.

Census 11—East 5, Centre 4, West 2.

5	Cork E.	†Near Castletownroche '97—Phillips.
9	Clare	Khyber Pass '99—Miss Knowles. Burren and Ennis, v.r.
14	Queen's	Abbeyleix '87, Vowell—*Cyb.* II. Durrow—Hart *388*.

18 King's Birr demesne abundant '00—W. de V. Kane.
21 Dublin ‡Near Finglas '93—Colgan.
24 Longfd. Near Ballymahon '00—P.
28 Sligo Hazelwood, J. Wynne—*Cyb.* I.
32 Monaghn. Glasslough '00, Monaghan '98—W. de V. Kane!
37 Armagh Tanderagee demesne '92—P.
38 Down Loughbricland '93, Lett—B.N.F.C. *125*. Very rare.
39 Antrim Glenoe '95—B.N.F.C. *129*. Very rare—*Fl. NE.*

†**Mercurialis annua** L.

Census 8—East 5, Centre 1, West 2.

3 Cork W. Baltimore '92 (C. Longfield)—Phillips.
4 Cork Mid Sunday's Well '96: frequent near Cork—Phillips.
5 Cork E. Tivoli '00—Phillips. Youghal—Allin *Fl.*
6 Waterfd. Waste ground at Waterford '99—P.
7 Tipp. S. Carrick-on-Suir '99—P.
9 Clare Ennis '79—Corry *240*.
11 Kilkny. Kilkenny '00—Phillips. Callan '00—Mrs. Persse.
21 Dublin Rathmines '00—Colgan. Abundant around Dublin.

Established about towns in the southern half of Ireland, being especially abundant near Dublin. The Beal Castle record of Smith's *Kerry* (1756) has never been confirmed.

Ulmus montana With. Elm.

Divisions all, *except 9, 16, 17, 19, 23, 26, 27, 30, 31, 32,* and probably occurs in all as an introduced tree. In the following stations alone it appears to have claims to be considered native:—

8 Limrck. Mountain glen above Doon '00—P.
18 King's Glen in Slieve Bloom above Kinnitty '00—P.
34 Dongl. E. Brown Hall and Laghy "apparently native"—*Fl. Don.*
35 Dongl. W. Glen above Lough Eske—*Fl. Don.*
39 Antrim Frequent in mountain glens—Stewart, and P.

There can be little doubt that this tree is truly indigenous, but between the destruction of the natural woods, and the replanting of the country, the record is most confusing. As a native it appears to be now confined to upland glens, chiefly in the north.

***Humulus Lupulus** L. Hop.

Census 22+(2)—East 9+(2), Centre 8, West 5.

1 Kerry S. Beaufort '00—Scully. Cloonee '98—P.

2	Kerry N.	Killarney '00 : rather rare—Scully.
3	Cork W	Schull '94—Phillips. Glandore, Blind Hbr.—Allin *Fl.*
4	Cork Mid	Inniscarra (Alexander)—Power *Fl.* '45. Rare—Phillips.
5	Cork E.	Near Fermoy '94—P. Rare—Phillips.
6	Waterfd.	Whitefork—Miss S. Grubb '00.
7	Tipp. S.	R. Suir below Ardfinnan established '82—Hart *385*.
8	Limrck.	Castleconnell '00—O'Brien. Limerick—Somerville.
9	Clare	Inishmore '95—P. Widespread but rare.
10	Tipp. N.	North of Templemore '82—Hart *385*. Very rare.
11	Kilkny.	Kilkenny '97—P. Rare.
12	Wexford	Sandhills north of Courtown established '96—P. Rare.
14	Queen's	Maryborough '96—P. Rather frequent.
18	King's	Shannon Harbour and Banagher '98—P.
19	Kildare	Athy '97—P.
20	Wicklow	Wicklow '97—P.
21	Dublin	Near Tynan '96 : rare—Colgan.
23	Westmth.	Near Mayne, well established—Levinge '96 *486*.
26	Mayo E.	Foxford '00—P.
35	Dongl. W.	Carrablagh, Carrick, Donegal—*Fl. Don.*
36	Tyrone	By Lough Neagh '96—Miss Knowles.
37	Armagh	Near Loughgall '92—P.
(38	Down	Grey Abbey—*Ir. Fl.* '33. Very rare.)
(39	Antrim	Newforge—*Fl. Belfast.* '63. Very rare.)

Established in many places, especially in the south, but showing little inclination to spread. In the north-east a mere outcast, not seen for many years.

Urtica dioica L. Nettle (genus.)

Divisions all. Common.

Urtica urens L.

Divisions all. Frequent.

Parietaria officinalis L. Wall Pellitory.

Census 35—East 15, Centre 10, West 10.

Divisions all, *except 24 Longford, 29 Leitrim, 32 Monaghan, 33 Fermanagh, 35 Donegal W.* Rather local : only one station noted for 10, 14, 16, 18, 20, 25, 27, 28. Frequent in most of the remaining divisions. Commoner in the east than in the west, and in the west than in the centre.

Myrica Gale L. Bog Myrtle.

Census 38—East 13, Centre 13, West 12.

Divisions all, *except 13 Carlow, 21 Dublin.* Rare in the east, but the last named is probably the only division in which the plant does not occur.

Betula verrucosa Ehrh. Birch (genus).

Census 19—East 5, Centre 7, West 7.

1	Kerry S.	‡Kenmare '00: rather frequent—Scully.
2	Kerry N.	‡Listowel '94: rather frequent—Scully.
3	Cork W.	Dunmanway '00—Phillips.
5	Cork E.	†Queenstown Junction '97—Phillips.
7	Tipp. S.	Fethard '97—P. †Cahir '00—Phillips.
10	Tipp. N.	Dromineer '00—Phillips. Lough Derg only, frequent.
13	Carlow	Bog at St. Mullin's, †Carlow, '98—P.
14	Queen's	Abbeyleix '98—P.
15	Galw. SE.	Woodford '98—P. Frequent on Lough Derg.
16	Galw. W.	Clonbur '95—Marshall.
17	Galw. NE.	Clonbrock '96—P.
19	Kildare	Carbury '96—P.
20	Wicklow	Avondale '99—P.
22	Meath	Lough Sheelin '96—P.
24	Longfd.	Lough Forbes '00—P.
25	Roscomn.	Mote Park '97, Athlone '98—P.
26	Mayo E.	Claremorris '00—P. Clonbur '95—Marshall.
29	Leitrim	Rinn Lough '99—P.
30	Cavan	Lough Oughter and Farnham '96—P.

Lowland, and as a native generally in peaty soil round the edges of the great bogs, and of lakes and rivers in the Limestone Plain. Often planted in shrubberies and woods. Apparently absent from the north.

Betula pubescens Ehrh.

Divisions all. Frequent, both in the plain and on the hills.

Alnus glutinosa Medic. Alder.

Divisions all. Common.

Corylus Avellana L. Hazel.

Divisions all. Abundant.

Quercus Robur L. Oak.

Divisions all, *except 22 Meath.* Usually common.

Salix triandra L. Willow, Sallow (genus).

Census 11—East 6, Centre 5, West 0.

5	Cork E.	Fermoy—Allin *Fl.* '83. Castle Hyde. †—Phillips.
7	Tipp. S.	North-west of Cahir '00—P.
10	Tipp. N.	Cloughjordan '00—P.
11	Kilkny.	Kilkenny '00—Phillips. Thomastown, Ballyragget—P.
12	Wexford	Alderton '89—B. & M. *MS.*
13	Carlow	R. Barrow at Borris and below St. Mullin's '98-9—P.
14	Queen's	By the Barrow at Graigue '99—P.
23	Westmth.	Knock Drin '95—Levinge *486.*
33	Ferman.	Florencecourt—*Fl. Hib.* '36.
38	Down	Ballyalloly—*Fl. Belfast* '63.
39	Antrim	Balmoral! '86—Stewart. Rare, south only—*Fl. NE.*

Is probably native along the Blackwater, Barrow, and Nore. Elsewhere its standing is difficult to determine.

Salix pentandra L. Bay Willow.

Census 27+(3)—East 8+(1) Centre 10, West 9+(2).

(1	Kerry S.	*Castle Cove '00: local and rare—Scully.)
(3	Cork W.	*Dunmanway and Dunboy (Sullivan)—Allin *Fl.* '83.)
(4	Cork Mid	‡Blarney—Drummond '19 *287.* ? Planted—Phillips.)
9	Clare	River Annagh '45—Carter *195.*
11	Kilkny.	Johnstown '98—P.
14	Queen's	Maryborough '97—P. Frequent in east, rare in west.
15	Galw. SE.	R. Suck near Ballinasloe—Foot '65 *328.*
16	Galw. W.	Kylemore '94—P. Very rare?
17	Galw. NE.	Clonbrock '96—P.
18	King's	Lough Goura '98, Edenderry '96: frequent—P.
19	Kildare	Kildare and marsh at Curragh '97—P.
22	Meath	Enfield '96—P.
23	Westmth.	Near Mullingar—Levinge '94 *484.* In west, rare—P.
24	Longfd.	Castlerea '00: not rare—P.
25	Roscomn.	Near Athlone '98—P.
26	Mayo E.	Lough Carra '94—Mrs. Persse!
27	Mayo W.	Lough Conn and ‡Ballina '00—P.
28	Sligo	Annaghmore '00—P. Not rare.
29	Leitrim	Glenade '99—P. Frequent in north half.

30	Cavan	Farnham '97—P.
31	Louth	Dunleer '00—P.
32	Monaghn.	Drumreaske '00—Waddell. Frequent.
33	Ferman.	Enniskillen '99—P. Frequent.
34	Dongl. E.	Meendoran '98—Hart *405*. North r., south f.—*Fl. Don.*
35	Dongl. W.	Glenalla, and frequent in the south—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles. Sperrin Mountains f.—P.
37	Armagh	Frequent throughout '92—P.
38	Down	Holywood hills '00—P. Frequent—*Fl. NE.*
39	Antrim	Ballymena '00—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Garvagh '94—P. Common, D. Moore—*Fl. NE.*

Frequent and native in the north. Thins out southward, till in Cork and Kerry it appears only as an introduction.

‡**Salix fragilis** L. Crack Willow.

Census 17—East 6, Centre 5, West 6.

1	Kerry S.	Kenmare '00 : rather frequent—Scully.
2	Kerry N.	Listowel '99 : frequent—Scully.
3	Cork W.	Inchigeela '00 : frequent—Phillips.
4	Cork Mid	Carrigrohane '98 : common—Phillips.
5	Cork E.	Midleton '00 : common—Phillips.
7	Tipp. S.	Thurles and Fethard '98—P.
11	Kilkny.	Kilkenny '00—Phillips. Thomastown '98—P.
12	Wexford	River Urrin, and near Rosslare—B. & M. *MS.*
14	Queen's	Boleybeg bridge '98—P.
21	Dublin	Portrane '00 : frequent, probably planted—Colgan.
23	Westmth.	Quarry bog—Levinge '94 *484*.
24	Longfd.	Longford '98—P.
29	Leitrim	Lough Melvin '99—P.
32	Monaghn.	Monaghan '00—Waddell. Ballybay '00—Somerville.
34	Dongl. E.	Glentogher River, &c. : rare—*Fl. Don.*
35	Dongl. W.	Glenlough looking native, Fanet—*Fl. Don.*
39	Antrim	Shane's Castle, D. Moore—*Cyb.* I.
40	L'derry	Near Dungiven and Limavady, D. Moore—*Cyb.* I.

Probably introduced in all stations; but, as with the other lowland willows, its status is very difficult to decide.

†**Salix alba** L. White Willow.

Division all, *except 16 Galway West and 26 Mayo East.* Probably an original native of the river-sides, but now generally planted.

Salix cinerea L. Sallow.

Divisions all. Common.

Salix aurita L.

Divisions all. Common.

Salix Caprea L.

Divisions all. Frequent.

Salix repens L.

Census 32—East 13, Centre 8, West 11.

Divisions all, *except 7 Tipperary S., 19 Kildare, 24 Longford, 29 Leitrim, 30 Cavan, 32 Monaghan, 36 Tyrone, 37 Armagh.* One station only in 8, 14, 22, 31. A local species.

Salix phylicifolia L.

Census 6—East 2, Centre 0, West 4.

27	Mayo W.	Mweelrea '82—Hart *380*.
28	Sligo	Ben Bulben '85—Linton *502*. Ben Bulben range *f*.
29	Leitrim	Near Kinlough '84—B. & V. *112*.
35	Dongl. W.	Glenlough—*Fl. Don.*
39	Antrim	Glenballyeamon, D. Moore—*Cyb.* I.
40	L'derry	Enagh Lough '34, D. Moore—*Fl. Hib.*

Apparently very rare. Planted in Westmeath (Levinge *486*).

Salix nigricans Sm.

34	Dongl. E.	Urris Mountains, C. Moore—*Cyb.* II.
39	Antrim	Glendun, &c., D. Moore—*Cyb.* I. Rare—*Fl. NE.*
40	L'derry	Near Dungiven, &c., D. Moore—*Cyb.* I.

Not seen in Ireland for many years, and its rediscovery is desirable. Planted in Westmeath (Levinge *486*).

‡**Salix viminalis** L. Osier.

Divisions all. Frequent.

Probably originally introduced.

Salix herbacea L.

Census 17—East 6, Centre 3, West 8.

1	Kerry S.	Waterville '92: on most of the mountains—Scully.
2	Kerry N.	Mangerton '96: rare, and in south only—Scully.
3	Cork W.	Sugarloaf and Priest's Leap (Carroll)—Allin *Fl.* '83.
6	Waterfd.	Commeraghs c., Knockmealdowns r. '82–3—Hart *381*.
7	Tipp. S.	L. Muskry '00—P. Galtees f., Knockmealdowns r.
8	Limrck.	Galtymore '80—Hart.
16	Galw. W.	Muckanaght '98—Colgan. Twelve Bens frequent.
20	Wicklow	Lugnaquilla '97—Colgan. High grounds, very rare.
27	Mayo W.	Nephin '00—P. High grounds frequent.
28	Sligo	Cloonacool L. '96—Colgan. Ben Bulben range rare.
31	Louth	Carlingford Mountain '00—P.
34	Dongl. E.	Slieve Snacht '98—Hart *405*. North only—*Fl. Don.*
35	Dongl. W.	Aghla, &c.: very frequent—*Fl. Don.*
36	Tyrone	Dart '92—P.
38	Down	Slieve Donard '97—P. Mourne summits common.
39	Antrim	Slievenanee '86—P.
40	L'derry	Benevenagh '92—P. Rare—*Fl. NE.*

†**Salix purpurea** L. Rose Willow.

Census 34—East 12, Centre 12, West 10.

1	Kerry S.	*Hillville near Clahane '94: local—Scully.
2	Kerry N.	*Knockamore '94—Scully.
3	Cork W.	†Macroom '00—Phillips. Millstreet (Carroll)—Allin *Fl.*
4	Cork Mid	†Dooniskey '97; frequent—Phillips.
5	Cork E.	†Near Castletownroche '00: frequent—Phillips.
6	Waterfd.	Cappoquin '99—P.
8	Limrck.	Drumkeen '00—P.
10	Tipp. N.	Roscrea '00—Phillips. Cloughjordan, L. Ourna—P.
11	Kilkny.	Nore at Thomastown '98, and above Ballyragget—P.
13	Carlow	Borris '99—P.
14	Queen's	†Maryborough '96—P.
15	Galw. SE.	Ballinasloe '00—Phillips.
17	Galw. NE.	Clonbrock '96, ‡Dunmore '00—P.
18	King's	Birr '00—Phillips. Frequent—P.
19	Kildare	Robertstown '98: frequent—P.
21	Dublin	‡Portmarnock and near Finglas '94—P.
22	Meath	Boyne Obelisk '97, Enfield, Coonen Hill—P.

23 Westmth. †Knock Drin—Levinge '94 *484*. †West, rare—P.
24 Longfd. Near Roosky '00, ‡Granard, ‡Longford—P.
25 Roscomn. Boyle and Mount Talbot '97, †elsewhere: frequent—P.
26 Mayo E. Ballyhaunis '00, Ballaghaderreen '98—P.
27 Mayo W. L. Conn '00—P. *Newport—Marshall. Killery.
28 Sligo †L. Arrow '97, *Annaghmore—P. Glencar—B. & V. *112*.
29 Leitrim Drumahaire '99—P. Throughout.
30 Cavan Farnham '96—P.
32 Monaghn. Annaghmakerig Lough '00—P.
33 Ferman. Enniskillen '00, Florencecourt, Ballycassidy River—P.
34 Dongl. E. *Reelan Bridge: throughout, rare—*Fl. Don.*
35 Dongl. W. *Fanet, Killybegs, &c: rare—*Fl. Don.*
36 Tyrone †Sperrin mountains frequent '92—P.
37 Armagh Frequent throughout '92—P.
38 Down ‡Craigavad '00—P. †Rare—*Fl. NE.* and *874*.
39 Antrim Ballycastle '97—P. †Frequent—*Fl. NE.* and *874*.
40 L'derry Upperlands '94—P. †Rare—*Fl. NE.*

Looks native along many of the streams in the Central Plain.

Populus tremula L. Aspen.

Census 32—East 11, Centre 10, West 11.

1 Kerry S. ‡Kenmare '99: rather frequent—Scully.
2 Kerry N. ‡Listowel '99: frequent—Scully.
3 Cork W. †Dunmanway '00: frequent—Phillips.
4 Cork Mid †Blarney '98: frequent—Phillips.
5 Cork E. †Glanmire '00: common—Phillips.
6 Waterfd. †Cappoquin '99—P.
7 Tipp. S. Fethard '98, Clonmel '97—P.
8 Limrck. †Adare '99—Somerville. ‡Lough Gur '00—P.
9 Clare Woodcock hill near Cratloe native '97—Bentley!
10 Tipp. N. Dromineer '97, Portumna, Cloughjordan—P.
12 Wexford Killoughrim forest—B. & M. *MS.*
13 Carlow Borris '99, below St. Mullin's '98—P.
14 Queen's Maryborough and Emo '96—P.
16 Galw. W. Clonbur '95—Marshall. Inishbofin—More *616*.
17 Galw. NE. Annaghdown on Lough Corrib '00—P.
18 King's Clonad wood '96, Shannon Harbour, and †frequent—P.
19 Kildare North of Levitstown '99, †Maynooth—P.
20 Wicklow Glendalough cliffs and about Luggela '94—P.
22 Meath †Along the Boyne near Beauparc '00—P.

24	Longfd.	Elfeet Bay on Lough Ree '00—P.
26	Mayo E.	Glendaduff cliffs '00—P.
27	Mayo W.	L. Conn '00—P. Achill Sound—Marshall. Inishturk.
28	Sligo	Knockachree '96—Colgan. L. Gill, †L. Arrow—P.
29	Leitrim	‡Garadice Lough '00—P.
30	Cavan	Lough Oughter and Farnham '96—P.
33	Ferman.	Goat Island '92: native on L. Erne and L. Melvin—P.
34	Dongl. E.	Malin, &c.: extreme north only—*Fl. Don.*
35	Dongl. W.	Barra River: frequent—*Fl. Don.*
36	Tyrone	Mullaghcarn '96—Miss Knowles.
37	Armagh	Throughout, frequent in north-west, '92—P.
38	Down	Cliffs over Blue Lough '92—P. Very rare as a native.
39	Antrim	Glarryford '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Near Garvagh '95—P. Frequent—*Fl. NE.*

Native on mountain cliffs (as in 20, 26, 38, 39), rocky lake-shores (10, 16, 17, 24, 27, 28, 30, 33), wild ground (7, 9, 13, 14, 18, 19, 27, 40), &c., and on the edges of bogs and rivers. Mr. Colgan finds it nowhere native in Dublin.

Empetrum nigrum L. Crowberry.

Census 30—East 11, Centre 9, West 10.

1	Kerry S.	Derrynane '92: local—Scully.
2	Kerry N.	Mangerton '96: rare and local—Scully.
3	Cork W.	Millstreet mountains '00: rare—Phillips.
4	Cork Mid	Mushera mountain (Gollock)—Allin *Fl.* '83.
6	Waterfd.	Stilloge and Coumshingaun lakes '82–3—Hart *381*.
7	Tipp. S.	Bog at Ballinure '98—P. Frequent on the mountains.
9	Clare	Carn Seefin '99—Miss Knowles. Burren c.; Ballycar.
10	Tipp. N.	Summit of Keeper '80—Hart *369*.
12	Wexford	Blackstairs '99, Mount Leinster '98—P.
13	Carlow	Blackstairs '99, Mount Leinster '98—P.
14	Queen's	Mountrath '97, Arderin—P. Capard—Hart *383*.
15	Galw. SE.	Lough Derg below Woodford '98—P.
16	Galw. W.	Muckanaght '98—Colgan. Locally frequent.
18	King's	Frankford '00, Tullamore, Shannon Hbr., Arderin—P.
19	Kildare	Nurney '97, Carbury—P. Edenderry—D.N.F.C. *305*.
20	Wicklow	Thonelagee '94—P. Frequent on the mountains.
21	Dublin	Seecawn '00: locally abundant—Colgan.
23	Westmth.	Lisclogher bog—Levinge '94 *484*.
24	Longfd.	Bog near Roosky '00—P.

27 Mayo W. Nephin '00—P. Frequent.
29 Leitrim Glenade '99—P. Lough Allen—Stewart *859*.
30 Cavan In the north-west '84—Stewart *859*.
33 Ferman. Legland Mountain '81—Stewart *854*.
34 Dongl. E. Throughout, common—*Fl. Don.*
35 Dongl. W. Throughout, common—*Fl. Don.*
36 Tyrone Mullaghcarn '96—Miss Knowles.
37 Armagh Slieve Gullion '93: bogs and mountains frequent—P.
38 Down Slieve Donard '00—Tetley. Frequent—*Fl. NE.*
39 Antrim Slemish '97—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Mullaclogha '83—Hart *381*. Frequent—*Fl. NE.*

At low levels (under 300 feet) in 1, 2, 7, 9, 14, 15, 16, 18, 19, 23, 24, 27, 29, 34, 35, 37, 38, 39.

Ceratophyllum demersum L. Hornwort.

Census 10—East 6, Centre 2, West 2.

2 Kerry N. Killarney '99—Scully and Phillips.
4 Cork Mid Lough of Cork '98—Phillips. Blarney L.—Allin *Fl.*
6 Waterfd. Melbrook near Clonmel, Miss A. Taylor—*Cyb.* I.
8 Limerick Lough Gur '00—P.
9 Clare By the Fergus near Ennis '00—R. D. O'Brien!
22 Meath Navan (Scott)—Mackay '25 *522*.
23 Westmth. Lough Deravaragh '92—Levinge!
38 Down Carrickmannan Lake (Waddell)—S. & P. *874*. Rare.
39 Antrim Ushet Lake on Rathlin Island '82—Stewart.
40 L'derry Near Jackson Hall, D. Moore—*Cyb.* I.

Wade's Connemara record is probably erroneous. Dr. Moore's station "above Derry" is indefinite as regards the county to which it belongs: Mr. Hart failed to find it on the Donegal side.

Juniperus communis L. Juniper.

Census 12—East 0, Centre 2, West 10.

1 Kerry S. Killarney '96: very rare—Scully.
2 Kerry N. Killarney '99: rare and local—Scully.
3 Cork W. Mountains in Bere (Hincks)—Power *Fl.* '45.
10 Tipp. N. Dromineer '00—Phillips. Frequent on Lough Derg.
15 Galw. SE. L. Derg below Woodford '98—P. F. about L. Derg.
16 Galw. W. Lisoughter '98—Colgan. Roundstone '96—P.
17 Galw. NE. Merlin Park near Galway '99—Mrs. Joyce!

26 Mayo E. Lough Carra '94—Mrs. Persse!
27 Mayo W. Glencullen Mtn. '98—Colgan. Delphi Mtn.—Hart *380*.
28 Sligo Knockachree '96—Colgan.
34 Dongl. E. Near Greencastle '93—P. Very rare—*Fl. Don.* & *405*.
35 Dongl. W. Fanet and Glenveagh—*Fl. Don.*

Confined to the mountains and lake shores of the west.

Juniperus nana Willd.

Census 14—East 3, Centre 0, West 11.

1 Kerry S. Cloonee '00: rare—Scully.
2 Kerry N. Killarney '99—Scully.
3 Cork W. Dunboy '94—Phillips. Bere promontory only, rare.
9 Clare Carn Seefin '99—Miss Knowles. Burren and Aran f.
15 Galw. SE. Ardrahan '00—P. Frequent in the west.
16 Galw. W. Derryclare '99—Colgan *221*. Frequent throughout.
27 Mayo W. Croaghaun '99—Colgan. Local, frequent.
28 Sligo Ben Bulben '84—B. & V. *112*.
29 Leitrim On the coast '97—P.
34 Dongl. E. Throughout, frequent—*Fl. Don.*
35 Dongl. W. Throughout, frequent—*Fl. Don.*
38 Down Slieve Bearnagh '98—P. Mournes, local—S. & P. *873*.
39 Antrim Glenariff '86—P. Local—*Fl. NE.*
40 L'derry Benevenagh '00—Lett and Waddell. Ballygaylagh—Sampson *821*.

The Kilcornan (17) record of John Ball (*93*) is withheld pending confirmation: *J. communis* and *J. nana* have not always been distinguished. Confined to the west and north-east.

Taxus baccata L. Yew.

Census 17+(3)—East 4+(1), Centre 2+(2), West 11.

1 Kerry S. Cloonee '98—P. Rather rare—Scully.
2 Kerry N. Ardfert '99: chiefly in the south—Scully.
3 Cork W. Near Macroom '97: rare—Phillips.
4 Cork Mid. Blarney, Carrigrohane—Power *Fl.* '45. Rare—Phillips.
5 Cork E. †Castletownroche '00: rare in a wild state—Phillips.
9 Clare Rocks at Doonass '97, Bentley—*Hb.* L.F.C. Burren f.
15 Galw. SE. Garryland '00—P. Kilmacduagh '97—Mrs. Joyce!
16 Galw. W. L. Inagh '98—Colgan. Craigga More and L. Corrib—P.

17 Galw. NE. Wild ground by the Suck at Donamon '97—P.
18 King's †Clonad Wood among *Rhamnus* &c. '96—P.
(20 Wicklow ‡Rough wood at Avondale '99—P.)
(24 Longfd. *Inchcleraun, one old tree, '85–6—B. & V. *113*).
(26 Mayo E. ‡By Lough Mask below Ballinrobe '94—Mrs. Persse !)
27 Mayo W. Rocks on SW. shore of Lough Conn '00—P.
28 Sligo Cliffs of Seefin '96—Colgan.
29 Leitrim Lough Gill on rocks '99—P. Glencar—B. & V. *112*.
33 Ferman. Carrick and Knockmore '81—Stewart *854*.
35 Dongl. W. Glenveagh and Lough-an-ure—*Fl. Don.*
39 Antrim Glenarm and Cavehill '39—*Hb.* D. Moore. Glenariff, Templeton—*Cyb.* II.
40 L'derry Benevenagh '35, D. Moore—*Fl. NE.*

Rocks, cliffs, old woods, and lake shores, now almost confined to the west: formerly more abundant. The Wicklow, Longford, and E. Mayo records very possibly represent the last remnants of aboriginal stock, but it is impossible now to say, and introduced trees grow around.

***Elodea canadensis** Michx. Water-Thyme.

Census 35—East 14, Centre 13, West 8.

2 Kerry N. Listowel '99—Scully.
4 Cork Mid Ballyphehane '96: rare—Phillips.
5 Cork E. Castlemartyr and Ightermorrough Castle—Allin *Fl.* '83.
6 Waterfd. Blackwater at Cappoquin most abundant '99—P.
7 Tipp. S. Fethard '00—Phillips.
8 Limrck. Lough Gur '00—P. Limerick '99—Somerville.
9 Clare Ennistymon '99—Miss Knowles. Killaloe '96—Colgan.
10 Tipp. N. Dromineer '00—Phillips. Portumna '97—P.
11 Kilkny. Graiguenamanagh '00—Phillips. St. Mullin's—*383*.
12 Wexford Enniscorthy '98—P. Frequent.
13 Carlow Tullow '99: common—P.
14 Queen's Maryborough '96: rather rare—P.
15 Galw. SE. Woodford '98—P. South-east only, frequent.
16 Galw. W. Moycullen '99—P. L. Corrib, L. Mask—M. & S. *545*.
17 Galw. NE. Clonbrock '96, and frequent in the south-west—P.
18 King's Philipstown '96, and Shannon—P. Barrow—Hart *383*.
19 Kildare Kilcock '96, Athy—P. Near Monasterevan—Hart *383*.
20 Wicklow Hollybrook near Bray (Barrington)—More '72 *614*.
21 Dublin Canal at Clondalkin '00: frequent—Colgan.

22	Meath	Laytown '95: frequent—P.
23	Westmth.	Mullingar '99—P. Frequent in centre and west.
24	Longfd.	Longford 98: common—P.
25	Roscomn.	Mote Park '97—P. Frequent.
26	Mayo E.	Kilmovee '99—P. L. Corrib, L. Mask—M. & S. *545*.
28	Sligo	Ballysadare '99, L. Arrow—P. Sligo, Colgan—*Cyb.* II.
29	Leitrim	Drumahaire '99: frequent throughout—P.
30	Cavan	Ballyconnell '00—Somerville. Cavan, Mt. Nugent—P.
31	Louth	Barmeath '90—Butler *185*. Boyne Obelisk '96—P.
32	Monaghn.	Annaghmakerig Lough '00—P. Not rare.
33	Ferman.	Belcoo '00—P. Frequent along the Erne.
34	Dongl. E.	Erne and Bundowes rivers—*Fl. Don.*
36	Tyrone	By Lough Neagh '96—Miss Knowles.
37	Armagh	Frequent throughout '92—P.
38	Down	Downpatrick '00—P. Frequent.
39	Antrim	Ballymena '99—Miss Knowles. Abundant—*Fl. NE.*
40	L'derry	Kilrea '94—P. ? Rare.

Rare in the mountainous portions of the country, widespread over the low grounds, in rivers, lakes, ponds and canals. First introduced into Ireland about 1836; now decreasing in many places.

Hydrocharis Morsus-ranæ L. Frog-bit.

Census 13—East 6, Centre 4, West 3.

9	Clare	Ennis plentiful '85–6—Stewart *863*.
15	Galw. SE.	Portumna '98—P.
21	Dublin	Bog of the Ring '00: rare—Colgan.
22	Meath	Beauparc '00: centre and north frequent—P.
23	Westmth.	Lough Iron '99—P. Centre and west very frequent.
25	Roscomn.	Rinanny Point on Lough Ree '85–6—B. & V. *113*.
29	Leitrim	Near Carrick-on-Shannon '99—P.
30	Cavan	Near L. Oughter '96—P. Belturbet, D. Moore—*Cyb.* I.
31	Louth	Castlebellingham '00—W. de V. Kane. Centre c.—P.
33	Ferman.	Near Pettigoe, Miss Young—*Cyb.* II.
37	Armagh	South of Derryadd Bay on L. Neagh '92—P.
38	Down	Near Portaferry, Templeton—*Fl. NE.*
39	Antrim	Portmore and Gawley's Gate '86—P. *Cushendun.

Middle and east of Ireland chiefly, with Louth and Meath as centre. The Connemara record (Wade *902*) is probably an error.

‡Stratiotes aloides L. Water-soldier.

4 Cork Mid *Ballyphehane '96—Phillips.
33 Ferman. Belleisle '00—West.
39 Antrim Mill-dam near Carrickfergus '96—B.N.F.C. *133*.

The above are the only stations where at present the Water-soldier is known to grow. It is also recorded from the Boyne and Shannon, and mill-dams about Belfast, and as abundant in the upper part of the Erne basin, but has not been recently found in any of these stations. There can be no doubt that it is an introduction in its Belfast and Cork stations. About Lough Erne it has been known for nearly a century, and is naturalized there, but probably originally introduced.

Malaxis paludosa Swartz. Bog Orchis.

Census 11—East 6, Centre 0, West 5.

1 Kerry S. Cahersiveen '96 : rare—Scully.
3 Cork W. Between Inchigeela and Macroom, Sullivan—*Cyb.* I.
9 Clare Near Lisdoonvarna, T. Warren—*Cyb.* I.
13 Carlow Hills about Old Lochlin, Templeton *MS.*—*Cyb.* II.
15 Galw. SE. Lough Derg south of Woodford, Hart—*Cyb.* II.
16 Galw. W. Base of Carn Seefin ! '95—J. A. Audley.
19 Kildare Bog south of Thomastown '96—P.
20 Wicklow Upper Lough Bray '70—Hart. Rare.
21 Dublin Glendhu Mountain '94—Colgan. Southern hills, v.r.
37 Armagh Moyntagh bogs, Hyndman—*Fl. Ulst.* '64.
39 Antrim Lough Naroon '78—Stewart. Very rare—*Fl. NE.*

Neottia Nidus-avis Rich. Bird's-nest.

Census 23—East 10, Centre 6, West 7.

1 Kerry S. Uragh woods '84—Hart *388*.
2 Kerry N. Killarney '00 : rare and local—Scully.
6 Waterfd. Curraghmore '00—Flemyng. Cappoquin ; Lismore.
8 Limrck. Curragh Chase '00—P. Mt. Trenchard '98—*Hb.* L.F.C.!
11 Kilkny. Ullard Wood near Borris '00—T. Hartley.
12 Wexford Near Courtown '96—P.
13 Carlow Borris demesne '96—T. Hartley.
16 Galw. W. Oughterard '93—Mrs. Persse ! Ashford '95—*Cyb.* II.

17 Galw. NE. Clonbrock '96—P.
20 Wicklow Powerscourt '97—D.N.F.C. *304*. Dargle—*Cyb.* I.
21 Dublin Luttrellstown wood '14 (Templeton *MS.*)—Colgan.
23 Westmth. Knock Drin—Levinge '94 *484*.
25 Roscomn. Rockingham (D. Moore)—More '72 *614*.
28 Sligo Lough Gill '99—P. Frequent around Lough Gill.
30 Cavan Farnham '96—P.
33 Ferman. Hill west of Ely Lodge '99—P. Crum Castle—*108*.
34 Dongl. E. Brown Hall—*Fl. Don.*
35 Dongl. W. Ards (M. Murphy)—More '72 *614*, and *Fl. Don.*
36 Tyrone Favour Royal '96, Miss F. Leebody—*Cyb.* II. Rare.
37 Armagh Gosford Castle '92—P.
38 Down Tollymore Park '90—P. Belvoir Park—*Fl. NE.*
39 Antrim Garron Tower '00—Mrs. Leebody. Rare—*Fl. NE.*
40 L'derry Limavady '95—B.N.F.C. *130*. Rare—*Fl. NE.*

Widely but very sparingly distributed. More frequent in the north-east than elsewhere.

Listera cordata R. Br.

Census 25—East 10, Centre 6, West 9.

1 Kerry S. Kells '92 : rare—Scully.
2 Kerry N. Derrycunihy '98—P.
3 Cork W. Millstreet mountains '00—Phillips.
6 Waterfd. Coumshingaun and near Coumduala '81–2—Hart *381*.
7 Tipp. S. Slievenaman '00—P. Bay Lough '82–3—Hart.
12 Wexford Near Ballycarney '91—G. E. J. Greene.
14 Queen's Arderin '97—P. Cullenagh (Bradbury)—Mackay *521*.
16 Galw. W. Corcogemore '82—Hart *380*.
18 King's Arderin '97—P.
20 Wicklow L. Bray '94—P. L. Nahanagan; Maulin Mtn.; Glencree.
21 Dublin Glencullen '99—Colgan. Mountains in south, rare.
22 Meath Bog by Lough Sheelin '96—P.
27 Mayo W. Mallaranny '99—Marshall. Corslieve '59—Moore *574*.
28 Sligo Ben Bullen range frequent '84—B. & V. *112*.
29 Leitrim Slievanieran '84—Stewart *859*.
30 Cavan Slievenakilla '84—Stewart *859*.
31 Louth Carlingford Mountain '83—Hart *381*.
33 Ferman. Mountain above Florencecourt '00—P.
34 Dongl. E. L. Naminn, &c. : Inishowen only, frequent—*Fl. Don.*
35 Dongl. W. Muckish, &c. : frequent—*Fl. Don.*

36	Tyrone	Bessy Bell '96—Miss Knowles. Mullaghclogha—*381*.
37	Armagh	Slieve Gullion : south r., '92—P. Montiaghs—Lett.
38	Down	Slieve Bearnagh '92—P. F. in Mournes, r. elsewhere.
39	Antrim	West of Ballycastle '97—P. Frequent—*Fl. NE.*
40	L'derry	Benevenagh '89—P. Frequent—*Fl. NE.*

Widespread, but very rare except on the northern hill-ranges. At low levels (under 300 feet) in 22, 34, 35, 37, 38, 39.

Listera ovata R. Br. Twayblade.

Divisions all. Frequent.

Spiranthes autumnalis Rich. Lady's Tresses.

Census 16—East 5, Centre 4, West 7.

.	Kerry S.	Cahersiveen c. '00—W. H. Beeby! Local—Scully.
2	Kerry N.	Rahaneen '92 : very local—Scully.
3	Cork W.	Cape Clear '96 : frequent in the south—Phillips.
4	Cork Mid	Crosshaven '96 (Scully) : frequent—Phillips.
5	Cork E.	Whitegate '00 : frequent—Phillips.
6	Waterfd.	Tramore '00—Flemyng. Coast f., r. elsewhere.
7	Tipp. S.	Cashel '96—Miss Butler-Lowe ! Ballybrada—*Cyb.* I.
8	Limrck.	Askeaton '00—P.
9	Clare	Ballyallia '00—R. D. O'Brien. Widespread but local.
10	Tipp. N.	Eastern shore of Lough Derg, D. Moore—*Cyb.* I.
12	Wexford	Ballyhyland '99 (Moffat) : rare—B. & M. *103* and *MS.*
15	Galw. SE.	Kilcolgan '99 : west v.c.—P. Portumna—*Cyb.* I.
16	Galw. W.	Roundstone '96—P. Ashford, Oughterard—*Cyb.* II.
17	Galw. NE.	Ballindooly and abundant in south-west '99—P.
21	Dublin	North Bull '00—P. And in extreme south, very rare.
26	Mayo E.	Lough Carra '94—Mrs. Persse ! Houndswood, Miss Jackson—*Cyb.* II.

Southern half of Ireland, commoner in the west than in the east, and rare off the limestone.

Spiranthes Romanzoffiana Cham.

3	Cork W.	Berehaven '91, Leitch—*Cyb.* II. East of Dunmanway '73—Allin *15*. Near Desert '74 (Longfield)—Allin *Fl.*
37	Armagh	Bog in North Armagh '92—P. *688*.
40	L'derry	Kilrea '00—Mrs. Crookshank ! A mile below Kilrea ! '94—Mrs. Leebody.

Cephalanthera ensifolia Rich.

Census 10+(2)—East 3+(2), Centre 1, West 6.

1	Kerry S.	Head of Lough Caragh (Battersby)—More '72 *614*.
2	Kerry N.	Derrycunihy '91—Scully. Mucross '88—Scully *824*.
3	Cork W.	Glengariff (Allman)—Allin *Fl.* '83. Adrigole—*Cyb.* I.
6	Waterfd.	Curraghmore '94—W. W. Flemyng!
13	Carlow	Ballintemple '85, Lady Butler—*Cyb.* II.
15	Galw. SE.	Derryvunlam wood '00—Miss Mary Amber!
20	Wicklow	Glenealy '97, Jonathan Pim—*Cyb.* II.
23	Westmth.	Hare Island abundant '99—P. Crow I.—B. & V. *113*.
27	Mayo W.	Close to the bridge at Pontoon '98—W. de V. Kane!
35	Dongl. W.	Ardnamona Wood '86—*Fl. Don.*
(38	Down	Derry Lough 1694 (Sherard)—Ray: *Synopsis* 1696. Extinct.)
(39	Antrim	Muckamore, Glenavy, Shane's Castle—see *Fl. NE.* Extinct?)

Epipactis latifolia All. Helleborine (genus).

Census 31—East 13, Centre 9, West 9.

2	Kerry N.	Killarney '99: local—Scully.
3	Cork W.	Whitehall near Skibbereen—Allin *Fl.* '83.
5	Cork E.	Castle Hyde '94—P. Buttevant, Blackwater—Allin *Fl.*
6	Waterfd.	Portlaw '00, near Clonmel '97—P.
7	Tipp. S.	Kiltinan near Clonmel—Miss S. Grubb '00!
8	Limrck.	Curragh Chase '99—Somerville. Foynes—Stewart *863*.
9	Clare	Dromoland '98—W. de V. Kane!
10	Tipp. N.	Cloughjordan '00—Phillips.
11	Kilkny.	Ullard wood '00—T. Hartley. Kilmanagh—*Cyb.* I.
12	Wexford	Courtown '96—P. Slaney & tributaries—B. & M. *103*.
15	Galw. SE.	Kilcornan '99, C. Taylor—Mrs. Joyce! Garryland—P.
16	Galw. W.	Between Galway and Oughterard '83—Hart *406*.
20	Wicklow	Killoughter '97—P. Frequent around Enniskerry.
21	Dublin	Abbotstown woods '95: rare—Colgan.
22	Meath	Beauparc and thence towards Navan '00—P.
23	Westmth.	Hare Island '99, Killenure Lough '98—P.
26	Mayo E.	Near Ballinrobe '94—D. D. Persse!
27	Mayo W.	Derreen '00—P.
28	Sligo	Hazelwood '96—Colgan.
30	Cavan	Farnham '96—P.
31	Louth	Collon—*Ir. Fl.* '33.

32 Monaghn. Glasslough '00—Waddell. Drumreaske; Dartrey.
33 Ferman. Castle Coole '00—West. Very frequent.
34 Dongl. E. Buncrana (Hunter) and Brown Hall—*Fl. Don.*
35 Dongl. W. Ards, &c.: rare—*Fl. Don.*
36 Tyrone Favour Royal '96—Miss Knowles.
37 Armagh Gosford Castle: frequent in north half, '92—P.
38 Down Holywood '00—P. Frequent—*Fl. NE.*
39 Antrim Crumlin '00—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Bond's glen, D. Moore—*Cyb.* I. Frequent—*Fl. NE.*

Commoner in the north than in the south: rare in the centre.

Epipactis media Fr.

2 Kerry N. Muckross woods, Levinge—*Cyb.* II.
21 Dublin Co. Dublin, D. Moore—*Cyb.* I.
23 Westmth. Knock Drin '95—Levinge *486.*
39 Antrim Glenarm, Stewart—*Cyb.* I.

Apparently very rare.

Epipactis atro-rubens Schultz.

9 Clare Carn Seefin '99—Miss Knowles. Near Dromoland—Foot *324.* Locally abundant in Burren.
15 Galw. SE. Hills south of Kinvarra '00—P.
16 Galw. W. Near Cong '95—M. & S. *545.*
17 Galw. NE. Knockmae! '99—Mrs. Joyce.

Confined to the western limestones; mostly on bare hills.

Epipactis palustris Crantz.

Census 29+(2)—East 9+(2), Centre 9, West 11.

1 Kerry S. Ferriter's Cove, Babington *in Hb.*—*Cyb.* II.
2 Kerry N. Tarbert '90—Scully. Near Tralee—Scully *824.*
6 Waterfd. Curraghmore '90—W. W. Flemyng.
7 Tipp. S. Cashel '96—Mrs. Nicholson! Rathronan—Miss Grubb!
8 Limrck. Castleconnell '97, Bentley—*Hb.* L.F.C.! Foynes—*863.*
9 Clare Near Ballyallia '00—P. H. Grierson! Frequent.
10 Tipp. N. Dromineer! '00—Phillips. F., especially on L. Derg.
11 Kilkny. Thomastown and Urlingford '98—P. Wilton—*Cyb.* I.
12 Wexford Wexford '96—Marshall. Frequent along the east coast.
13 Carlow South of Carlow '98—P. Borris '96—T. Hartley.
14 Queen's Maryborough '96—P. Frequent.

15	Galw. SE.	Marble Hill '98—P. Very frequent.
16	Galw. W.	Ross Lake '99, by R. Corrib above Galway '95—P.
17	Galw. NE.	N. of Menlo '99, S. of Headford, near Clonbrock—P.
18	King's	Lough Goura '98—P.
19	Kildare	Nurney and near Curragh '97—P. Ballitore—*Cyb.* I.
20	Wicklow	Between Ovoca and Arklow—Mrs. Wynne '00. Rare.
21	Dublin	Portmarnock '00—P. South only, very rare.
22	Meath	Riverstown near Trim, Miss Cuppage—*Cyb.* II.
23	Westmth.	Balrath '99—Miss E. Reynell! Athlone district f.
25	Roscomn.	Athlone '98—P. Mount Talbot '95—R. E. Dillon.
26	Mayo E.	Ballinrobe '94—Mrs. Persse! L. Carra, More—*Cyb.* I.
27	Mayo W.	Castlebar '99—Marshall. Killala and Ballina '00—P.
28	Sligo	Lough Talt '96—Colgan.
29	Leitrim	Glenade '99—P.
31	Louth	Near Castlebellingham '90—Butler *185*.
33	Ferman.	Near Crum Castle (Scott), Templeton *MS.*—*Cyb.* II.
34	Dongl. E.	Near Ballyshannon—*Fl. Don.*
35	Dongl. W.	Horn Head, Ardara, and Lough Eske—*Fl. Don.*
(38	Down	Knocknagoney '20, Templeton—*Fl. NE.* ? Extinct.)
(39	Antrim	Ballintrae, D. Moore—*Cyb.* I. ? Extinct.)

A characteristic plant of the Central Plain, thinning out in the north and south. Apparently extinct in the north-east.

Orchis pyramidalis L.

Census 38—East 15, Centre 11, West 12.

1	Kerry S.	Derrynane '96: rather frequent—Scully.
2	Kerry N.	Ballybunnion '99: frequent—Scully.
3	Cork W.	Kilkern, &c. '91: rare, and south only—Phillips.
4	Cork Mid	Crosshaven '00: rare—Phillips.
5	Cork E.	Whitegate '99: frequent—Phillips.
6	Waterfd.	Cappagh '99, Portlaw '00—P. Clonmel—Miss Grubb.
7	Tipp. S.	Cahir '00: frequent throughout—P.
8	Limrck.	Kilmallock '00—Phillips. Askeaton '00—P. North c.
9	Clare	Carn Seefin '99—Miss Knowles. Frequent.
10	Tipp. N.	Nenagh '99—P. Frequent, especially in NW.
11	Kilkny.	Thomastown '98—P. Widespread but local.
12	Wexford	Gorey and Rosslare '97—Marshall. Frequent, local.
13	Carlow	Milford '99—P. Frequent by Barrow and Slaney.
14	Queen's	Cullenagh '97—P. Widespread but not common.
15	Galw. SE.	Portumna '98, and frequent in the south-west—P.

16	Galw. W.	Gentian Hill! '00—Phillips.
17	Galw. NE.	Tuam district common '99, Clonbrock '96—P.
18	King's	Lough Goura '98—P. Local, not common.
19	Kildare	Kildare '97: frequent throughout—P.
20	Wicklow	Arklow—More '72 *614*. Very rare.
21	Dublin	Baldoyle '00—P. Throughout—Colgan *214*.
22	Meath	Beauparc '00: centre and west frequent—P.
23	Westmth.	Mullingar '99—P. Frequent in centre and west.
24	Longfd.	Elfeet Bay '00, Priest's Island, Lough Forbes—P.
25	Roscomn.	Corkip L. '99, Athlone '98—P. Roscommon—*Cyb.* I.
26	Mayo E.	Claremorris '00—P. Ballinrobe '91—Mrs. Persse!
27	Mayo W.	West of Castlebar '99—Marshall.
28	Sligo	Mullaghmore '00, Carrowmore '92—P.
29	Leitrim	Drumcoura Lough '00—Somerville.
31	Louth	Ballymascanlan '00, Ardee '97—P.
32	Monaghn.	Bragan '00—Waddell.
33	Ferman.	Florencecourt '99—West. Near Enniskillen—*Fl. Ulst.*
34	Dongl. E.	Bundoran '00—West. Greencastle, R. Erne—*Fl. Don.*
35	Dongl. W.	Near Ardara, &c.: throughout, rare—*Fl. Don.*
37	Armagh	About Loughgall and Armagh '92—P.
38	Down	Ballyholme '73, two plants—Stewart.
39	Antrim	Magheragall near Lisburn '88—P.
40	L'derry	Magilligan '95—P.

Strongly calcicole, and in the north and south, where limestone is absent, usually found on sand-dunes, where lime is often abundant.

Orchis Morio L. Green-winged Orchis.

Census 20—East 9, Centre 7, West 4.

6	Waterfd.	Sugar-loaf Hill—Miss I. Horne.
7	Tipp. S.	Fethard! '00—Phillips. Very frequent.
10	Tipp. N.	Rapla '99—P. Frequent—Hart, and P.
11	Kilkny.	Kilkenny '97—P. Frequent.
12	Wexford	Ballyhyland—Moffat '89 *552*. Enniscorthy; R. Bann.
13	Carlow	Tullow '99, Leighlinbridge, Bagenalstown—P.
14	Queen's	Camross '97—P. Widespread and frequent.
15	Galw. SE.	Woodford '98—P. Frequent.
16	Galw. W.	Ross Lake '99, Roundstone district frequent—P.
17	Galw. NE.	Knockmae '99—P.
18	King's	Frankford '00, Geashill, Tullamore, Cadamstown—P.
19	Kildare	Kilcullen '96—P. Punchestown, Straffan—*Cyb.* I., II.

20	Wicklow	Baltinglass, Chandlee; Woodenbridge, Moore—*Cyb.* I.
21	Dublin	Near Lusk '00: local—Colgan.
22	Meath	Hill of Down '00—P. Laytown! '94—G. Pim.
23	Westmth.	Kilmaglish and Knock Eyon—Levinge '94 *484*.
25	Roscomn.	Corkip L. '99, Mote Park, Mt. Talbot—P. Athlone.
26	Mayo E.	Claremorris '00—P.
27	Mayo W.	Near Rosserk abbey '00—P.
31	Louth	Killencoole '96—P.

A characteristic Central Plain species. Absent from Cork and Kerry (the Cork records being "probably errors"—Phillips), and from the whole of Ulster.

Orchis mascula L. Early Purple Orchis.

Divisions all, *except 22 Meath*. Frequent.

Orchis incarnata L.

Divisions all, *except 9 Clare*. Appears to be common throughout the country.

Orchis latifolia L. Marsh Orchis.

Census 10—East 2, Centre 4, West 4.

6	Waterfd.	Kilmacthomas '82 (Britten & Nicholson)—Marshall *541*.
8	Limrck.	Curragh Chase '99—Somerville.
12	Wexford	Rosslare and Raven Point '96—Marshall.
16	Galw. W.	Maam '96—Marshall.
17	Galw. NE.	Clonbrock '96—P.
23	Westmth.	Kiltoom '91—Levinge.
26	Mayo E.	Cong '96—Marshall.
27	Mayo W.	Mallaranny '99—Marshall.
28	Sligo	Inishmurray '96—P.
32	Monaghn.	Dartrey '00—Somerville.

Possibly frequent. The segregate *O. latifolia* has been so much misunderstood in Ireland that I give only such occurrences as have been noted or verified by critical botanists acquainted with the plant. The Waterford and Wexford plant is var. *brevifolia* H. G. Reich., which is perhaps the prevailing Irish form.

Orchis maculata L. Spotted Orchis.

Divisions all. Common.

Ophrys apifera Huds. Bee Orchis.

Census 26+(1)—East 9+(1), Centre 10, West 7.

3	Cork W.	Kilkern '91 : rare, and in south only—Phillips.
4	Cork Mid	Crosshaven '00 : rare—Phillips.
5	Cork E.	Youghal '96 : rare—Phillips.
6	Waterfd.	Cappoquin c. '94, Miss Chearnley—*Cyb.* II. **Local.**
7	Tipp. S.	Cahir '00—P. Frequent in the south.
8	Limrck.	Adare and Limerick '99—Somerville.
9	Clare	Inishmore '90—Nowers & Wells *651*. Centre and NW. f.
10	Tipp. N.	Dromineer '99 : frequent—P.
11	Kilkny.	Drummin wood '00, and Ullard—T. Hartley.
12	Wexford	Rosslare '98—S. Armstrong! Frequent, chiefly in south.
13	Carlow	Borris and St. Mullin's '96—T. Hartley.
14	Queen's	Abbeyleix '98—P. Tinnehinch bridge '84—Hart *383*.
15	Galw. SE.	St. Clerans! '00—Mrs. Joyce. SE. and SW., rare.
16	Galw. W.	Gentian Hill '99—P. Frequent in Cong district.
17	Galw. NE.	Merlin Park '99—Mrs. Joyce. Clonbrock!—D. McArdle.
18	King's	Geashill! '96—Miss E. Russell. F. along Shannon—P.
19	Kildare	Co. Kildare—*Cyb.* I.
(20	Wicklow	Bray Head—*Fl. Hib.* '36, &c. : no recent record).
21	Dublin	Near Malahide '00 : very rare—Colgan.
22	Meath	Kilmessan '00—P.
23	Westmth.	Hare Island in L. Ree '99—P. And in centre, rare.
25	Roscomn.	Athlone '98—P. Mount Talbot '95—R. E. Dillon.
26	Mayo E.	Near Claremorris '00—P. Frequent in SW.
27	Mayo W.	West of Castlebar '99—Marshall.
28	Sligo	Sligo Harbour, J. Wynne—*Cyb.* I.
32	Monaghn.	Drumreaske '00, canal near Monaghan '98—Kane.
33	Ferman.	Long Island in Lower Lough Erne '00—West.

Strongly calcicole, with a distribution corresponding to that of the Carboniferous limestone.

Ophrys muscifera Huds. Fly Orchis.

Census 8—East 2, Centre 2, West 4.

9	Clare	Turlough Hills '92—O'Kelly! Glanquin—Corry *238*.
11	Kilkny.	Johnstown '43, Castlecomer, J. Despard—*Cyb.* I. & *526*.
15	Galw. SE.	Moyode '99—P. F. in west—Mrs. Joyce and P.
16	Galw. W.	North-east of Ross Lake '99—P.
17	Galw. NE.	Coolaran '00—P. Near Headford, Miss Lindsey—*Cyb.* I.

18	King's	Annaghmore plentiful, M. P. Edgeworth—*Cyb.* I.
19	Kildare	Near Athy '45, Miss Haughton: rare—*Cyb.* I. & *526*.
26	Mayo E.	Lake View '95 (Miss Jackson)—Mrs. Persse.

A limestone plant, ranging sparingly over the Central Plain, and frequent only on the western limestones.

Habenaria conopsea Benth. Fragrant Orchis.

Census 38—East 14, Centre 13, West 11.

1	Kerry S.	Castlegregory '94—Scully.
2	Kerry N.	Tarbert '90: rather rare and local—Scully.
4	Cork Mid	By the Lee near Cork—Drummond '20 *287*.
5	Cork E.	Near Youghal (C. Ball)—Allin *Fl.* '83.
6	Waterfd.	Sheskin '00—Phillips.
7	Tipp. S.	Fethard '00—Phillips. Widespread but rare.
8	Limrck.	Mullagh '00—P. Frequent in the north.
9	Clare	Lisdoonvarna '00—Miss Knowles. Frequent throughout.
10	Tipp. N.	Nenagh '99: common except in the south-west.—P.
11	Kilkny.	Thomastown, Urlingford, '98—P. Wilton; Bellevue.
13	Carlow	South of Carlow '98—P.
14	Queen's	Mountrath '97—P. Throughout, frequent.
15	Galw. SE.	Rinville '99: frequent but local—P.
16	Galw. W.	Ross district abundant '00—P. Clonbur '95—Marshall.
17	Galw. NE.	Barbersfort '99: frequent throughout—P.
18	King's	Birr '00—Phillips. Frequent throughout—P.
19	Kildare	Leixlip '96, and abundant in the centre—P.
20	Wicklow	Between Enniskerry and Dargle—*Ir. Fl.* '33.
21	Dublin	Raheny '00: frequent—Colgan.
22	Meath	Bective '00: frequent—P.
23	Westmth.	Lough Iron '99—P. Very frequent.
24	Longfd.	Longford '98, Saint's Island '00—P.
25	Roscomn.	Roscommon '00: common in south half—P.
26	Mayo E.	Claremorris '00—P. Common.
27	Mayo W.	Newport '99—Colgan. Ballina to Killala '00—P.
28	Sligo	Dromore West '96—Colgan. Common in east half.
29	Leitrim	Glenade '99: in the north and south, frequent—P.
30	Cavan	Lough Oughter and Mount Nugent '96—P.
31	Louth	Braganstown '97—P. Tinure—*Ir. Fl.*
32	Monaghn.	Drumreaske '00, Tireran—W. de V. Kane. Newbliss—P.
33	Ferman.	Florencecourt, Belcoo, '00—P. Ely Lodge—*108*.
34	Dongl. E.	Ballindrait, &c.: throughout, local—*Fl. Don.*

35	Dongl. W.	Horn Head, &c.: throughout, local—*Fl. Don.*
36	Tyrone	Cookstown '96—Miss Knowles.
37	Armagh	About Loughgall and Armagh '80 (Johnson!)—P. *701.*
38	Down	Carngaver '92—P. Conlig Hill!, Stewart—*Fl. NE.*
39	Antrim	Slemish '00—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Near Portstewart '87—P. Very rare—*Fl. NE.*

Widespread, but rare or local in many divisions, as will be seen from the above records. Usually follows the limestone.

Habenaria intacta Benth.

9	Clare	Ballyvaughan '00—P. B. O'Kelly! Locally c. in Burren.
15	Galw. SE.	Moyode and Lough Fingall '99—P. Frequent in west.
16	Galw. W.	Two stations near Ross Lake '99—P.
17	Galw. NE.	By Lough Corrib at Keekill '99—P. Frequent in SW.
26	Mayo E.	By Lough Corrib near Cong '72 (D. Moore)—More *614.*

Has a limited and probably continuous range along the western edge of the Limestone Plain from Burren to Cong.

Habenaria albida R. Br.

Census 24—East 7, Centre 6, West 11.

1	Kerry S.	Killarney Upper Lake '99: rare—Scully.
2	Kerry N.	Lough Guitane '90—Scully.
3	Cork W.	Near Dunmanway '00—Phillips.
5	Cork E.	Dunbullogue glen—Power *Fl.* '45.
6	Waterfd.	Comeraghs '91—Miss I. Horne! Ballymacarbry.
9	Clare	Kilmoon '96—P. B. O'Kelly. Rare.
10	Tipp. N.	Hill west of Devil's Bit '98—P.
14	Queen's	Glendine '97—P. Very rare.
15	Galw. SE.	St. Clerans '00, Moyode—Mrs. Joyce! Centre rare.
16	Galw. W.	Benwee '99—Colgan. Rare.
20	Wicklow	Glencree, Scully—*Cyb.* II. Rare.
21	Dublin	Glenasmole '94—E. J. M'Weeney!
26	Mayo E.	Ballinrobe '91—Mrs. Persse! Near Foxford—*Cyb.* I.
27	Mayo W.	Mweelrea '82—Hart *380.*
28	Sligo	Ballysadare '99—P. Ben Whiskin, King's Mtn.—*112.*
29	Leitrim	Bruse Hill near Mohill (Foot)—More '72 *614.*
32	Monaghn.	Near Creeve Lough '00—P.
33	Ferman.	Poulaphuca '81-2—Barrington *108.*
34	Dongl. E.	Greencastle, Cliff, &c.: north and south, rare—*Fl. Don.*

35 Dongl. W. Poisoned Glen, &c.: throughout, rare—*Fl. Don.*
36 Tyrone Co. Tyrone, Admiral Jones—*Cyb.* I.
38 Down Carngaver and Conlig Hill '91—P.
39 Antrim Skerry '99—Miss Knowles. Rare—*Fl. NE.*
40 L'derry Near Dungiven, D. Moore—*Cyb.* I. Very rare—*Fl. NE.*

Habenaria viridis R. Br. Frog Orchis.

Divisions all, *except 37 Armagh.* Frequent.

Habenaria bifolia R. Br. Butterfly Orchis.

Census 36—East 11, Centre 13, West 12.

1 Kerry S. Glencar '99: rather frequent—Scully.
2 Kerry N. Abbeydorney '99: frequent—Scully.
3 Cork W. Skibbereen '99—Phillips. Not uncommon—Allin *Fl.*
4 Cork Mid Donoughmore '96: frequent—Phillips.
5 Cork E. Near Mitchelstown '97: rare—Phillips.
6 Waterfd. Kilmacthomas '99—P.
7 Tipp. S. Near Cahir '99: not rare—P.
8 Limrck. Curragh Chase and Foynes '99—Somerville.
9 Clare Lisdoonvarna '00—Miss Knowles. F., c. in Burren.
10 Tipp. N. Lough Ourna '99, Portumna '97—P.
11 Kilkny. Near St. Mullin's '00—T. Hartley! Urlingford—P.
12 Wexford Rosslare '97—Marshall. Not rare.
14 Queen's Mountrath '97: frequent throughout—P.
15 Galw. SE. Loughrea '98: centre and west frequent—P.
16 Galw. W. Lough Bofin '99—P. Frequent locally.
17 Galw. NE. Knockmae '00: frequent—P.
18 King's Frankford '00: frequent in the west—P.
19 Kildare Curragh and Athy '97—P.
20 Wicklow Marshes near Newcastle—More '72 *614*.
22 Meath Slieve Bregh '00, Mathews' Hill '97—P.
23 Westmth. Inny Junction '99—P. Frequent.
24 Longfd. Trillickacurry '98: frequent—P.
25 Roscomn. Lough Key '97: frequent—P.
26 Mayo E. Claremorris '00—P. South-west common—Marshall.
27 Mayo W. Mallaranny '99—Marshall. Frequent.
28 Sligo Mullaghmore '00: common in east half—P.
29 Leitrim Annaghearly L. '99—P. Drumshanbo—Stewart *859*.
30 Cavan Lough Oughter '96—P. Frequent.
31 Louth Ballymascanlan '00, Ardee '97—P.

32	Monaghn.	Kilmore Lough '00—Waddell. Not rare.
33	Ferman.	Florencecourt '00—P. L. Erne, two stations—*108*.
34	Dongl. E.	Brown Hall '00—P. Rare—*Fl. Don.*
35	Dongl. W.	Lough Fern, Glen Bay, &c.: rare—*Fl. Don.*
36	Tyrone	Mullaghcarn '96—Miss Knowles.
38	Down	Near Tollymore Park '90—P. Rare—*Fl. NE.*
39	Antrim	Clinty Hill '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Sconce Hill '95—P. Rare—*Fl. NE.*

Evenly spread over the greater part of the country; rare in parts of the east.

Habenaria chloroleuca Ridley. Butterfly Orchis.

Census 39—East 15, Centre 12, West 12.

1	Kerry S.	Killarney '99: frequent—Scully.
2	Kerry N.	Killarney '00: rather frequent—Scully.
3	Cork W.	Dunmanway '00: frequent—Phillips.
4	Cork Mid.	Carrigaline '00 (Scully): frequent—Phillips.
5	Cork E.	Castletownroche '00: rare—Phillips.
6	Waterfd.	Curraghmore abundant '00—W. W. Flemyng.
7	Tipp. S.	Ballinure '98—P. Kilbeheny '97—Phillips.
9	Clare	Lisdoonvarna '00—Miss Knowles. Burren c.—Foot *324*.
10	Tipp. N.	Near Nenagh '99—P. Frequent.
11	Kilkny.	Near Borris '84—Hart *383*.
12	Wexford	Courtown '96—P. Frequent in north—Moffat *552*.
13	Carlow	Near Borris '00—T. Hartley!
14	Queen's	Mountmellick '00—Phillips. Frequent throughout.
15	Galw. SE.	Dalystown '98: frequent on the hills—P.
16	Galw. W.	Oughterard '99—P. East only, frequent.
17	Galw. NE.	Barbersfort '99, Dunmore, Clonbrock—P.
18	King's	Birr '00—Phillips. Kinnitty '00—P.
19	Kildare	West of Baltinglass '99—P.
20	Wicklow	Lough Dan '94—P. Glendalough—Colgan. Rare.
21	Dublin	Glenasmole '00: rare—Colgan.
22	Meath	Slieve Bregh '00—P.
23	Westmth.	Lough Owel '99—P. Common in centre and west.
24	Longfd.	Lough Forbes '00, Carn Clonhugh '98—P.
25	Roscomn.	Roscommon '00—P. Common in north, rare in south.
26	Mayo E.	Claremorris '00—P. Frequent.
27	Mayo W.	Mallaranny '99—Marshall. Frequent.
28	Sligo	Inishmurray '96—P. Frequent throughout.
29	Leitrim	Drumcoura L. '00—Somerville. Frequent throughout.

30	Cavan	Lough Oughter '96—P. Not rare.
31	Louth	Ravensdale '00—P.
32	Monaghn.	Creeve Lough '00—P. Common in NW., rare elsewhere.
33	Ferman.	Florencecourt '00—P. Common.
34	Dongl. E.	Brown Hall '00—P. Throughout frequent—*Fl. Don.*
35	Dongl. W.	Throughout, frequent—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Frequent throughout '92—P.
38	Down	Hilltown '92—P. Frequent—*Fl. NE.*
39	Antrim	Clinty Hill '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Sconce Hill '95—P. Frequent—*Fl. NE.*

No doubt throughout the country, but rare in the east. The distribution of this and the last are given in detail, as they were not separated by the older observers.

***Iris fœtidissima** L. Gladdon.

Census 22—East 9, Centre 6, West 7.

1	Kerry S.	Sneem '94 : rare even as an escape—Scully.
2	Kerry N.	Killarney '99 : rare—Scully.
4	Cork Mid	Blarney—Power *Fl.* '45. Carrigrohane—*287*.
5	Cork E.	Castletownroche '00—Phillips. Glanworth—*Cyb.* I.
7	Tipp. S.	Fethard '97—P.
8	Limrck.	Curragh Chase! '99—Somerville.
9	Clare	Murrough '95, O'Kelly—*Cyb.* II. Near Ennis—*863*.
10	Tipp. N.	Ballingarry '00—P.
11	Kilkny.	Kilkenny '98—P. Very rare.
14	Queen's	Mountrath '97—P. And at Erril and Portarlington.
15	Galw. SE.	Near Loughrea f. '00—Phillips. Castle Taylor—*600*.
17	Galw. NE.	Clonbrock '96—P.
18	King's	Near Edenderry, Melville—*Cyb.* I.
19	Kildare	Narraghmore wood and Ballykillane, Carroll—*Cyb.* I.
20	Wicklow	Tythtewer—*Ir. Fl.* '33. Fassaroe—Wade *902*.
21	Dublin	Lambay Island—Hart '82 *376*. Rare.
26	Mayo E.	Ballinrobe '90—Mrs. Persse! Near Shrule—*Cyb.* II.
34	Dongl. E.	Brown Hall—*Fl. Don.* Culmore, D. Moore—*468*.
35	Dongl. W.	Rathmullen—*Fl. Don.*
37	Armagh	Armagh '92—P. Tartaraghan—Stewart.
38	Down	Clandeboye '00—P. Very rare.
40	L'derry	Near Coleraine, D. Moore—*Cyb.* I.

Naturalized, generally near the sites of old gardens, and sometimes spreading.

Iris Pseud-acorus L. Yellow Flag.

Divisions all. Common.

†Sisyrinchium angustifolium Mill. Blue-eyed Grass.

1 Kerry S. Cloonee '00: rare and local—Scully.
2 Kerry N. East of Killorglin '99—Scully.
3 Cork W. Near Schull '98—Mrs. Swan! Berehaven; Bantry.
9 Clare Scarriff '99—W. A. Fogerty!
15 Galw. SE. Woodford abundant; thence to near Portumna, '98—P.

No doubt an escape at Mullingar (*621*).

***Narcissus biflorus** Curtis.

4 Cork Mid Blarney, Carrigrohane—Power *Fl.* '45. *—Phillips.
9 Clare Inishcaltra c. '96—Colgan. Inishmore —*Cyb.* I.
12 Wexford Bannow established '93, Barrett-Hamilton—*Cyb.* II.
14 Queen's Six miles from Portarlington, D. Moore—*Cyb.* I.
21 Dublin Killiney obelisk plentiful, More—*Cyb.* I. Very rare.

A cultivated plant, naturalized in a few places. Note—Inishcaltra belonged formerly to Galway, but now belongs to Clare.

‡Leucojum æstivum L. Snowflake.

6 Waterfd. Kilbarry '00—Nicholson! ‡R. Clodiagh—Flemyng.
8 Limrck. Parteen '00 (R. D. O'Brien!)—P. *803*.
12 Wexford Macmine '97, looking wild—Marshall *541*.

The rank of this plant is discussed in the papers numbered *541*, *803*. Though thoroughly naturalized, with a better claim, for instance, than *Narcissus biflorus*, there is still a strong probability of its having escaped from cultivation originally.

Asparagus officinalis L. Asparagus.

6 Waterfd. Tramore '99—Phillips.
12 Wexford Bannow Island and Ballyteigue Bay '82—Hart *384*. Near Wexford—Mackay *526*.

Simethis bicolor Kunth.

1 Kerry S. Derrynane '00—Scully. Extending for about eight miles east of Derrynane, and a mile inland—Scully *826*, *827*.

‡Allium Babingtonii Borrer.

Census 6—East 0, Centre 0, West 6.

9 Clare Inishmore '95—P. Common in the Aran Islands.
16 Galw. W. Roundstone '92—Levinge! Inishbofin '75—More *616*.
17 Galw. NE. Menlough, More—*Cyb.* II.
27 Mayo W. Between Croaghpatrick and the sea—More '72 *614*.
34 Dongl. E. Tullagh and Malin '98—Hart *405*.
35 Dongl. W. Fanet, Inver Bay, &c.: widespread, rare—*Fl. Don.*

Thoroughly naturalized on the west coast.

†**Allium Scorodoprasum** L. Sand Leek.

1 Kerry S. Derrynane '00: rare and local—Scully.
2 Kerry N. Killarney and Tralee '99—Scully.
3 Cork W. Bantry '98, Castlefreke '90—Phillips.
4 Cork Mid. Above Mallow railway bridge, Vowell—*Cyb.* II.
5 Cork E. Fota '96—Phillips. Near Fermoy and Mallow '84—Hart *388*.

Possibly a relic of early cultivation, but now perfectly wild. Confined to the south.

Allium vineale L. Crow Garlic.

Census 15+(1)—East 10+(1), Centre 3, West 2.

2 Kerry N. East of Killorglin '99—Scully.
4 Cork Mid Ballinamought near Cork (D. Murray)—Power *Fl.* '45.
5 Cork E. Tivoli '94: rare—Phillips.
7 Tipp. S. Fethard '00—Phillips.
8 Limrck. Askeaton '00—P. Limerick; Loghil; Longpavement.
11 Kilkny. Thomastown '98—P. Frequent in the south-east.
12 Wexford Near Macmine '81—Hart *371*. F. along the Barrow.
13 Carlow Aghade '81—Hart *371*.
19 Kildare Poulaphuca '00—P.
20 Wicklow Poulaphuca '00—P. Rockfield, D. Moore—*Cyb.* I.
21 Dublin Greenhills '00: local—Colgan.
26 Mayo E. Cong church, Miss Jackson—*Cyb.* II.
31 Louth Near Queensborough '96—P.
34 Dongl. E. By the Foyle above Derry—*Fl. Don.*
(38 Down Rockport, Millen—*Fl. Belfast.* '63. ? Extinct.)
39 Antrim Antrim! '86—D. Redmond. Shane's Castle—*Fl. NE.*

A very local plant, occurring chiefly in the south and east. Though its occurrence in Waterford is probable, Smith's record (*844*), describing it as in "most of the pasture lands," is clearly erroneous.

†**Allium Schænoprasum** L. Chives.

26 Mayo E. On limestone "crags" south of Lough Mask, '95-6—Marshall *542*.

Claimed by Mr. Marshall as native, but further research appears necessary before so common a plant of cultivation can be admitted unquestioned as a member of the indigenous flora.

Allium ursinum L. Ramsons.

Census 37—East 14, Centre 11, West 12.

1 Kerry S. Glencar '90 : rare—Scully.
2 Kerry N. Tralee '90 : local, and chiefly in the south—Scully.
3 Cork W. Skibbereen '96 : rare—Phillips.
4 Cork Mid Ballinhassig '98 : frequent—Phillips.
5 Cork E. Near Glanmire '91 : frequent—Phillips.
6 Waterfd. Stradbally '99—P.
8 Limrck. Near Limerick '00—G. Fogerty!
9 Clare Lisdoonvarna—Miss Knowles. Cahircon—*Hb.* L.F.C.!
11 Kilkny. Kilkenny '96—Mrs. Persse. Woodstock '84—Hart *388*.
12 Wexford Courtown '96—P. Frequent in south—B. & M. *MS.*
13 Carlow About Borris '00, and St. Mullin's—T. Hartley.
14 Queen's Mountrath '97—P. Glenbarrow '84—Hart *383*.
15 Galw. SE. Dalystown '98—P. Frequent in the south.
16 Galw. W. Derryclare Lough '99—Colgan.
17 Galw. NE. Clonbrock '96—P.
18 King's Clonad wood near Tullamore '96—P.
19 Kildare Poulaphuca '00—P.
20 Wicklow Avondale '99—P. Frequent in the north-east.
21 Dublin Near Drimnagh '00 : local—Colgan.
23 Westmth. Coosan Lough '98—P.
24 Longfd. Near Roosky '00—P.
25 Roscomn. Mote Park and Lough Key '97—P.
26 Mayo E. Ballinrobe '90—Mrs. Persse!
27 Mayo W. Derreen '00—P. Crampaun River '82—Hart *380*.
28 Sligo Lough Gill '99—P.
29 Leitrim Glenade, L. Gill, '99—P. Glencar Lake '96—Colgan.
30 Cavan Lough Oughter '96—P.
31 Louth Beaulieu '99—Miss R. Smith!
32 Monaghn. Glasslough and Rossmore '00—Waddell.
33 Ferman. Garrison '00—P. Lough Erne c.—Barrington *108*.

34 Dongl. E. Buncrana, Brown Hall, &c.: N. and S., local—*Fl. Don.*
35 Dongl. W. Gweebarra, &c.: throughout, very local—*Fl. Don.*
36 Tyrone Omagh '96—Miss Knowles.
37 Armagh Frequent throughout '92—P.
38 Down Downpatrick '92—P. Frequent—*Fl. NE.*
39 Antrim Cullybackey '00—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Near Magilligan '94—Mrs. Leebody. Rare—*Fl. NE.*

Widespread, but a rare plant in most of the divisions.

Scilla verna Huds. Vernal Squill.

20 Wicklow Murrough '96 and Rockfield '93, Scully—*Cyb.* II.
21 Dublin Howth '00: local—Colgan.
31 Louth Clogher Head, Castlegar Hill, J. B. Hamilton—*Cyb.* I.
38 Down Orlock Point '99—P. Frequent—*Fl. NE.*
39 Antrim Whitepark Bay '99—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Downhill to Portrush abundant '94—Mrs. Leebody.

Confined to the east coast from Wicklow to Derry.

Scilla nutans L. Wild Hyacinth; Bluebell.

Divisions all. Common.

Colchicum autumnale L. Meadow Saffron.

11 Kilkny. Kilkenny '00—Phillips. Near Callan '98—T. Hartley. Frequent in the Nore valley.
13 Carlow Near Carlow, S. C. H. Cooper—*Fl. Hib.* '36.

Old records from Limerick, Dublin, Armagh and Down have never been confirmed. The re-finding of the plant in Carlow is desirable; excepting this station, its range as at present known is imited to the Nore basin.

Narthecium ossifragum Huds. Bog Asphodel.

Divisions all. Frequent.

Juncus bufonius L. Toad Rush.

Divisions all. Common.

Juncus squarrosus L. Rush (genus).

Divisions all, *except 19 Kildare, 23 Westmeath*, in which it no doubt occurs. Strongly calcifuge, and distributed accordingly, being rare in the Central Plain.

Juncus Gerardi Loisel.

Maritime and sub-maritime divisions all, including Kilkenny, Tyrone, and Armagh. Common on the whole coast.

†**Juncus tenuis** Willd.

1	Kerry S.	Kenmare '99: rare, but locally abundant—Scully.
2	Kerry N.	Upper Lake of Killarney '98: south only—Scully.
3	Cork W.	Berehaven, Dunboy, Adrigole, '94—Phillips.
9	Clare	Inishmore '95—P. B. O'Kelly!

Frequent in the extreme south-west: other stations on the west coast will probably be found.

Juncus glaucus Ehrh.

Divisions all, *except 1 Kerry South.* A calcicole plant, abundant everywhere on the limestone, rare and local elsewhere.

Juncus effusus L.

Divisions all. Abundant.

Juncus conglomeratus L.

Divisions all, but appears to be distinctly less abundant than the last.

Juncus maritimus Lamk.

Maritime and sub-maritime divisions all *except 29 Leitrim*: namely 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16, 17, 20, 21, 22, 27, 28, 31, 34, 35, 36, 37, 38, 39, 40. One station only in Antrim, but usually common on the coast.

Juncus acutus L.

3	Cork W.	Near Lough Hyne '96: rare—Phillips.
6	Waterfd.	Dungarvan '99—P. Frequent in the extreme east.
12	Wexford	Rosslare '97—Marshall. Whole east coast—Hart *384*.
20	Wicklow	Brittas Bay '96—P. Arklow to Wicklow frequent.

Locally abundant on the south and east coasts from Cape Clear to Wicklow town.

Juncus supinus Mœnch.

Divisions all. Common. Calcifuge.

Juncus obtusiflorus Ehrh.

Census 26—East 8, Centre 7, West 11.

1	Kerry S.	Castlegregory '94 : rare and local—Scully.
2	Kerry N.	Barrow Harbour '92 : rare and local—Scully.
3	Cork W.	Near Bandon, *Hb.* Mackay—*Cyb.* II.
7	Tipp. S.	Cahir '00—Phillips. Common in east half—P.
8	Limrck.	Adare '00—P. Frequent in the north.
9	Clare	Inishmore '95—P. Creagh R. mouth, Moore—*Cyb.* II.
10	Tipp. N.	Dromineer '00—Phillips. Very frequent.
11	Kilkny.	Urlingford and Johnstown '98—P.
13	Carlow	Carlow and Milford '98—P.
14	Queen's	Grantstown, '98 : frequent—P.
15	Galw. SE.	Woodford '00—Phillips. Centre and W. common—P.
16	Galw. W.	Glen Inagh '98—Colgan. Abundant—P.
17	Galw. NE.	Barbersfort '99 : common in west half—P.
19	Kildare	Rathangan '98, Kildare, Curragh—P.
20	Wicklow	Kilcoole '98—P. Frequent on the Murrough.
21	Dublin	Raheny '00 : local—Colgan.
22	Meath	Navan '97—P.
23	Westmth.	Kenny '99—P. Centre and west frequent.
25	Roscomn.	Corkip Lough '99—P.
26	Mayo E.	Claremorris, Ballyhaunis, Carrowkeribly L., '00—P.
27	Mayo W.	Newport '99—Colgan *221*. Widespread.
28	Sligo	Annaghmore '00—P. West and north frequent.
29	Leitrim	Uragh Lough '99—P.
31	Louth	Braganstown, Kerney's Cross, '97—P. Coast rare.
34	Dongl.E.	Along the Erne : extreme south only—*Fl. Don.*
38	Down	Near Ardglass '98—Waddell. Dundrum Bay—Stewart.

Generally conspicuously calcicole, but its abundance in parts of West Mayo and West Galway furnishes a marked exception. A characteristic plant of the Central Plain marshes, where it is often by far the most abundant Rush.

Juncus lamprocarpus Ehrh.

Divisions all. Common.

Juncus acutiflorus Ehrh.

Divisions all. Common.

Luzula vernalis DC. Wood-Rush (genus).

Census 25—East 12, Centre 7, West 6.

1	Kerry S.	Cloonee '00 : rather rare and local—Scully.
2	Kerry N.	Killarney '00 : rare, and chiefly in south—Scully.
3	Cork W.	Castletownsend '96 : frequent—Phillips.
4	Cork Mid	Mountdesart '98 : frequent—Phillips.
5	Cork E.	Glanmire '98 : frequent—Phillips.
6	Waterfd.	Lismore '99—P.
7	Tipp. S.	Fethard '97—P.
11	Kilkny.	Thomastown '98—P. Frequent in the south-east.
13	Carlow	Ballintemple '99, Bagenalstown '97—P.
15	Galw. SE.	Woodford '00—Phillips. Chevy Chase, Dalystown—P.
18	King's	Clonad wood '96—P.
20	Wicklow	Avondale '99—P. Frequent.
21	Dublin	Glendhu '95 : rare—Colgan.
22	Meath	Lough Sheelin '96—P.
23	Westmth.	Crooked wood '99—P. Frequent in the centre.
26	Mayo E.	Kilmovee '99—P.
32	Monaghn.	Glasslough '00—Waddell. Castleblayney—P.
33	Ferman.	Frequent on Lough Erne '81–2—Barrington *108*.
34	Dongl. E.	Kilderry, W. E. Hart : north and south, rare—*Fl. Don.*
35	Dongl. W.	Glenalla, Lough Eske, &c. : rare—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Frequent throughout '92—P.
38	Down	Downpatrick '97—P. Common—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Common—*Fl. NE.*
40	L'derry	Castlerock '95—P. Common—*Fl. NE.*

Local, and chiefly in the north and south. Rare in the west.

Luzula maxima DC.

Divisions all, *except 22 Meath.* Calcifuge ; abundant in woods and copses off the limestone.

Luzula campestris DC.

Divisions all. Common.

Luzula erecta Desv.

Divisions all, frequent. Calcifuge.

Typha latifolia L. Reed-mace (genus).

Divisions all. Frequent.

Typha angustifolia L.

Census 8+(1)—East 4+(1), Centre 3, West 1.

11	Kilkny.	Lough Cullin '99—P.
(21	Dublin	Formerly grew at Sandymount and Irishtown.)
23	Westmth.	River Inny near Inny Junction '99—P.
24	Longfd.	Lough Gowna '00—P.
30	Cavan	Lough Gowna '00—P.
35	Dongl. W.	Fanet, four stations—*Fl. Don.*
37	Armagh	Lough Gullion '92—P. And along Lough Neagh.
38	Down	North of Portaferry '97—P. Very rare.
39	Antrim	Portmore Lough '82, Lett: very rare—*Fl. NE.*

Sparganium ramosum Huds. Bur-Reed (genus).

Divisions all. Common.

Sparganium simplex Huds.

Census 36—East 14, Centre, 11, West 11.

Divisions all, *except 6 Waterford, 10 Tipperary N., 18 King's Co., 29 Leitrim.* Frequent.

Sparganium affine Schnizl.

Census 20—East 7, Centre 4, West 9.

1	Kerry S.	Waterville '92: rather frequent—Scully.
2	Kerry N.	Killarney '96: rare—Scully.
3	Cork W.	Schull promontary '96: rare—Phillips.
4	Cork Mid	Near Dooniskey '98—Phillips.
6	Waterfd.	Ballyscanlan Lake (Barrington)—More '72 *614*.
7	Tipp. S.	River Suir near Thurles '98—P.
15	Galw. SE.	Portumna '00—Phillips.
16	Galw. W.	Glen Inagh '98—Colgan. Widespread, frequent.
22	Meath	Whitewood Lough '97—P.
24	Longfd.	Canal north of Ballymahon '00—P.
26	Mayo E.	SE. corner of Lough Mask '95—M. & S. *545*.
27	Mayo W.	East shore of Lough Conn '00—P. Rare.
28	Sligo	L. Ramduff and L. Glendarragh '96—Colgan.
32	Monaghn.	Rossmore '00—Waddell. Frequent.

34	Dongl. E.	Near Ballyshannon and Pettigoe—*Fl. Don.*
35	Dongl. W.	Aranmore, &c.: common—*Fl. Don.*
37	Armagh	Lough Gilly '94—W. F. Johnson! Rare—P. *701.*
38	Down	Altnadua L. '92, Cotton Moss—P. Very rare—*Fl. NE.*
39	Antrim	Lough-na-cranagh '97—P. Rare—*Fl. NE.*
40	L'derry	Kilrea, &c., D. Moore: very rare—*Fl. NE.*

Lakes and streams; chiefly among the hills, but occurs here and there in the Central Plain. No doubt more widespread than the few segregate records show.

Sparganium minimum Fr.

Census 35—East 12, Centre 12, West 11.

1	Kerry S.	Near Waterville '92: rather rare—Scully.
2	Kerry N.	Killarney '99: rather rare—Scully.
3	Cork W.	Skibbereen '97: frequent in the south—Phillips.
4	Cork Mid	Ballyphehane '96: rare—Phillips.
5	Cork E.	Dunsfort, Midleton, Kilcoleman—Allin *Fl.* '83.
6	Waterfd.	Clonea marsh, Ballyscanlan Lough, '99—P.
7	Tipp. S.	Ballinure '98—P. Rare—Hart *381, 385.*
8	Limrck.	Lough Gur '00—P. Not rare in the north.
9	Clare	Fin L. '97—*Hb.* L.F.C.! Frequent in S.—Stewart *863.*
10	Tipp. N.	Lough Ourna '99, Thurles, Cloughjordan—P.
11	Kilkny.	Lough Cullin '99, Urlingford '98—P. Rare.
12	Wexford	Knockie bog, &c.—B. & M. *MS.* Clohamon—*371.*
13	Carlow	South of Carlow '98—P.
14	Queen's	Maryborough '93—P. Near Brittas—Hart *383.*
15	Galw. SE.	Castle Taylor—More '55 *598.*
16	Galw. W.	Roundstone '96—P. Frequent.
17	Galw. NE.	Menlo and along L. Corrib '99: rare—P.
18	King's	Clara '99—P. Parsonstown (M. Dowd)—More *614.*
19	Kildare	Rathangan '98, Nurney, Athy—P.
22	Meath	West of Navan '96—P.
23	Westmth.	Lough Iron '99—P. Very frequent.
24	Longfd.	Woodlawn '98—P.
25	Roscomn.	Corkip Lough '99, Athlone '98—P.
26	Mayo E.	Ballinrobe '94—Mrs. Persse! South only, rare.
27	Mayo W.	Lough Conn '00—P. Not common.
28	Sligo	Ballysadare '00—P.
29	Leitrim	Near Carrick-on-Shannon '99—P.
31	Louth	Ardee and Braganstown '97—P.

32	Monaghn.	Drumreaske '96—Kane! Clones (J. Bain)—More *614*.
33	Ferman.	Near Enniskillen '81–2—Barrington *108*.
35	Dongl. W.	Muckish '84, Colgan—*Cyb.* II. Rare?—*Fl. Don.*
36	Tyrone	Fymore Lough '87—Hart *392*.
37	Armagh	Near Portadown and Armagh '92—P.
38	Down	Conlig Hill '00—P. Very rare—S. & P. *874*.
39	Antrim	Near Scawt Hill '87—P. Very rare—*Fl. NE.*

Is generally present where bogs occur, in pools and drains.

Arum maculatum L. Cuckoo-Pint.

Divisions all. Very rare in Donegal, and generally rarer in the west than in the east.

***Acorus Calamus** L. Sweet Flag.

22	Meath	Canal below Navan '00, Boyne at Bective '96—P.
(32	Monaghn	Monaghan '00—Somerville. An importation—Kane.)
38	Down	Montalto '93—P. Lagan Canal abundant—*874*.
39	Antrim	Lagan Canal abundant—S. & P. '95 *874*.

Lemna trisulca L. Ivy-leaved Duckweed.

Census 32—East 14, Centre 12, West 6.

2	Kerry N.	Killarney '92—Scully.
5	Cork E.	Power Head '98: frequent—Phillips.
6	Waterfd.	Kilbarry bog '00—Miss I. Horne!
7	Tipp. S.	Cahir '00, Thurles '98—P.
8	Limrck.	Lough Gur '00—P. Limerick, Carroll—*Cyb.* I.
9	Clare	Ennis abundant '85–6—Stewart *863*.
10	Tipp. N.	Lough Ourna '99, Friar's Lough '97—P.
11	Kilkny.	Kilkenny '97, Ballyragget '99—P.
12	Wexford	Rosslare '89—B. & G. *101*. Enniscorthy, and SW.: rare.
13	Carlow	Borris '99—P.
14	Queen's	Emo '96—P. Frequent.
15	Galw. SE.	Portumna '98—P.
17	Galw. NE.	Near Galway! '00—Phillips. Tuam—Wade *902*.
18	King's	Banagher '98—P.
19	Kildare	Athy '97—P.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.
21	Dublin	Near Lusk '00: local—Colgan.
22	Meath	Ferns Lock '96—P. Navan—Mackay *522*.
23	Westmth.	Near Mullingar '99—P. C. in centre, r. in west.

24	Longfd.	Ballymahon '00, Longford '98—P.
25	Roscomn.	Lough Key '97, frequent on Lough Ree—P.
26	Mayo E.	Claremorris Lake '96—Marshall *537*.
27	Mayo W.	West of Castlebar '99—Marshall.
28	Sligo	L. Arrow '97—P. Near Sligo '84—B. & V. *112*.
30	Cavan	Tomkin Road '00—Somerville. L. Oughter '96—P.
31	Louth	Braganstown '97—P. Frequent.
32	Monaghn.	Drumreaske '00—Waddell. Frequent.
33	Ferman.	Lough Galliagh '00—West. Frequent.
37	Armagh	Frequent throughout '92—P.
38	Down	Loughinisland '92—P. Common—*Fl. NE.*
39	Antrim	Killagan '94—P. Common—*Fl. NE.*
40	L'derry	Magilligan '96—Mrs. Leebody. Common—*Fl. NE.*

Very rare in the NW. and SW., and generally scarce in the west.

Lemna minor L. Common Duckweed.

Divisions all. Abundant.

Lemna gibba L.

Census 13—East 9, Centre 4, West 0.

6	Waterfd.	Kilbarry bog '89—B. & G. *101*.
8	Limrck	Limerick '99—Somerville.
12	Wexford	Churchtown '98—Marshall *537*.
21	Dublin	Portrane '95 : rare—Colgan.
22	Meath	Drogheda '96—P.
31	Louth	Queensborough '96—P. Ardee—*Ir. Fl.* and *Cyb.* I.
32	Monaghn.	Clones '79—Stewart.
33	Ferman.	Near Enniskillen '81-2—Barrington *108*.
36	Tyrone	By Lough Neagh near Maghery '96—Mrs. Leebody!
37	Armagh	Newry and mouth of Closet River '92—P.
38	Down	Quoile River '99—P. Rare—*Fl. NE.*
39	Antrim	Bog meadows, Corry : very rare, S. only—*Fl. NE.*
40	L'derry	Magilligan '97—Mrs Leebody.

Lemna polyrhiza L.

Census 7+(1)—East 3+(1), Centre 3, West 1.

8	Limrck.	Limerick and Lough Gur '00—P.
13	Carlow	Graiguenamanagh '98—P.
17	Galw. NE.	Menlo '99—P.
21	Dublin	Phœnix Park, More—*Cyb.* I. Very rare.

23	Westmth.	Portnashangan—Levinge '94 *484*. Centre f., west v.r.
24	Longfd.	Lough Ree below Ballymahon '00—P.
31	Louth	Dundalk '75 (W. H. Phillips)—Stewart.
(39	Antrim	Lagan Canal! '84, Malcomson : introduced—*Fl. NE.*)

Alisma Plantago L. Water-Plantain (genus).

Divisions all. Common.

Alisma ranunculoides L.

Divisions all. Frequent.

Sagittaria sagittifolia L. Arrow-head.

Census 21—East 9, Centre 10, West 2.

8	Limrck.	Limerick '99—Somerville.
10	Tipp. N.	Slevoir Point '96—Colgan. Portumna—Mackay *522*.
11	Kilkny	Barrow at Graigue '00—Phillips, and Ullard—Hartley.
13	Carlow	Carlow '98—P. Barrow, frequent.
14	Queen's	Mountmellick '96—P. Barrow and Royal Canal only, f.
15	Galw. SE.	Woodford River '96—Colgan. Portumna !—Phillips.
18	King's	Tullamore '96 : Royal Canal only, frequent—P.
19	Kildare	Athy '99, Kilcock '96—P.
21	Dublin	Clondalkin '00—Colgan. Canals f., r. elsewhere.
22	Meath	Slane '95 : Boyne and Royal Canal, rare—P.
23	Westmth.	L. Deravaragh and R. Inny common—Levinge '94 *484*.
24	Longfd.	Longford '98—P. Inny mouth; Lanesborough; canal f.
25	Roscomn.	Drumsna '99—P. Lough Key—Foot *329*.
28	Sligo	River at Sligo '84—B. & V. *112*.
30	Cavan	Tomkin Road '00—Somerville. Widespread, rare.
33	Ferman.	Devenish and Kinarla '00—West. Very rare.
36	Tyrone	Blackwater mouth '96—Mrs. Leebody. L. Neagh only.
37	Armagh	L. Neagh, Blackwater, Bann, and canals, '92—P.
38	Down	Scarva '00—P. River Lagan and Newry Canal.
39	Antrim	Bushmills '87—P. Bann basin chiefly.
40	L'derry	Bann v.f. '94–5—P. Lake above Kilrea—*Cyb.* II.

Canal traffic has no doubt assisted the spread of this plant from its original home in the lakes and rivers chiefly of the centre and north. Absent from some of the larger rivers, as the Lee and Blackwater, Nore and Suir, and from the great lakes of Galway and Mayo.

Butomus umbellatus L. Flowering Rush.

Census 16+(1)—East 8+(1), Centre 6, West 2.

4	Cork Mid	Between Buttevant and Charleville '00—Phillips.
5	Cork E.	Near Buttevant '00: rare—Phillips.
6	Waterfd.	Lismore '99—P.
8	Limrck.	Near Limerick '00—G. Fogerty. Shannon only, rare.
9	Clare	Ennis '92, Levinge—*Cyb.* II. Shannon f.; Corrofin.
10	Tipp. N.	Nenagh River near Dromineer '96—Colgan.
(12	Wexford	Pond near Bannow (Mrs. Boyce)—B. & M. '93 *103*.)
15	Galw. SE.	Teeneran Lough near Gort '45—Carter *195*.
18	King's	R. Brosna at Parsonstown (M. Dowd)—More '72 *614*.
19	Kildare	Grand Canal near [Hazelhatch]—Mackay '25 *522*.
30	Cavan	Belturbet '99 (J. E. R. Allen)—West.
31	Louth	Mattock R., Hamilton; Boyne near Obelisk—*Cyb.* I., II.
32	Monaghn.	Canal at Bragan '00—Waddell.
36	Tyrone	Blackwater mouth c., '96—Mrs. Leebody. Doon Point.
37	Armagh	L. Neagh and waterways connected with it, c., '92—P.
38	Down	Lough Leagh '91—P. Rare—*Fl. NE.*
39	Antrim	Glenavy '00—Waddell. Rare—*Fl. NE.* and *874*.

A plant of uncertain standing in many of its stations, but probably an original native.

Triglochin palustre L. Arrow-grass (genus).

Divisions all. Common.

Triglochin maritimum L.

Maritime and sub-maritime divisions all, namely:—1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16, 17, 20, 21, 22, 27, 28, 29, 31, 34, 35, 36, 37, 38, 39, 40. Whole coast common.

Potamogeton natans L. Pondweed (genus).

Divisions all. Frequent.

Potamogeton polygonifolius Pourr.

Divisions all. Frequent. Strongly calcifuge.

Potamogeton fluitans Roth.

(24	Longfd.	River Inny below Ballymahon abundant (name somewhat doubtful) '85–6—B. & V. *113*.)
37	Armagh	Lough Neagh near Maghery '92—P.

Potamogeton Kirkii Syme.

16 Galw. W. Maam River '95—M. & S. *545*.

Potamogeton plantagineus Ducr.

Census 23—East 7, Centre 9, West 7.

3 Cork W. Near Bantry, Babington—*Cyb.* I.
4 Cork Mid Ballincollig '98 : rare—Phillips.
5 Cork E. Near Rathcooney '98—Phillips.
7 Tipp. S. Farranaleen '98, south of Cashel, Clonmel—P.
8 Limrck. Lough Gur and Mullagh '00—P.
9 Clare Fin Lough '97, W. Fogerty—*Hb.* L.F.C. !
10 Tipp. N. Lough Ourna '99 : frequent in north half—P.
11 Kilkny. Urlingford and Johnstown '98—P.
13 Carlow South of Carlow '98—P.
14 Queen's Maryborough '96 : frequent—P.
15 Galw. SE. Loughrea '97 : frequent except on the hills—P.
16 Galw. W. Moycullen '99—P.
17 Galw. NE. Barbersfort '99 : frequent throughout—P.
18 King's Lough Goura '98, Geashill '96 : frequent—P.
19 Kildare South of Kildare '97—P. Rare.
22 Meath Oldcastle '96, Enfield, Nobber —P.
23 Westmth. Lough Iron '99, and frequent in west—P. Centre, rare.
24 Longfd. L. Ree at Elfeet Bay and near Ballymahon '00—P.
25 Roscomn. Mote Park '97—P.
26 Mayo E. Ballaghaderreen '99—P. Hollymount, More—*Cyb.* I.
27 Mayo W. Ballina '00—P.
28 Sligo Ballysadare '00—P. Coolgagh Lough (Stewart)—*Hb.* A. Bennett.
31 Louth Ardee and Braganstown '97—P.

Strongly calcicole. A characteristic plant of the Central Plain. I omit the *Cybele*, ed. I., records for Wicklow, Dublin, Antrim and Derry. The plant has not been refound in any of these well-worked counties, and such habitats as "common in ditches on the bogs among the Dublin mountains" are quite inapplicable to the present species, which is lowland and calcicole, but would well fit some form of *P. polygonifolius*, to which, I believe, these records should be referred.

Potamogeton rufescens Schrad.

Census 27—East 8, Centre 11, West 8.

1 Kerry S. Glencar '99 : rare—Scully.
2 Kerry N. Killarney '99 : rare—Scully.

3	Cork W.	East of Lough Hyne—Allin *Fl.* '83.
4	Cork Mid	Blarney (R. Mills)—Allin *Fl.* '83. Rare—Phillips.
5	Cork E.	Castletownroche '00: frequent—Phillips.
7	Tipp. S.	Fethard and Clonmel '00—Phillips.
8	Limrck.	Near Limerick '00—P.
9	Clare	Lough Senan '85–6—Stewart *863*.
10	Tipp. N.	Cloughjordan '00—P.
11	Kilkny.	Kilkenny, Thomastown, Graiguenamagh, '00—Phillips.
14	Queen's	Below Athy, Scully—*Cyb.* II. Mountrath—*614*.
16	Galw. W.	Near Galway, Melville—*Cyb.* I.
18	King's	Near Mountrath (J. Morrison)—More '72 *614*.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.
23	Westmth.	Twy Lough '98—P. Centre and west, rare—*113*, *486*.
24	Longfd.	Lough Gowna '00—P.
27	Mayo W.	Newport and west of Castlebar '99—Marshall.
30	Cavan	Tomkin Road '00—Somerville. Belturbet—*Cyb.* I.
32	Monaghn.	Creeve Lough '00—P.
33	Ferman.	Carrick Lake '81—Stewart *854*.
34	Dongl. E.	Pettigoe—*Fl. Don.*
35	Dongl. W.	Near Churchill, &c.: rare—*Fl. Don.*
36	Tyrone	Omagh and in Lough Neagh '96—Miss Knowles.
37	Armagh	Tynan Abbey '92—P.
38	Down	Newcastle '97—P. Frequent—*Fl. NE.*
39	Antrim	Glendun, Brenan: frequent—*Fl. NE.*
40	L'derry	River Roe, D. Moore—*Cyb.* I. Rare.

Probably frequent, but appears rare in the Limestone Plain.

Potamogeton lanceolatus Smith.

9	Clare	Cahir River '92 (P. B. O'Kelly)—Levinge *482*.
17	Galw. NE.	Grange R. at Barbersfort '99, Clonbrock '96—P.

The Galway plants are of the large form for which Mr. Bennett has suggested the name var. *hibernicus* (*749*).

Potamogeton heterophyllus Schreb.

Census 30—East 12, Centre 8, West 10.

1	Kerry S.	Castlegregory '94: rare—Scully.
2	Kerry N.	Killarney '99: rare—Scully.
3	Cork W.	Inchigeéla '00—Phillips. "Common"—Allin *Fl.*
4	Cork Mid	Inniscarra '96: frequent—Phillips.
5	Cork E.	Mitchelstown '96: frequent—Phillips.

6	Waterfd.	Cappoquin '99—P.
8	Limrck.	Near Limerick, Harvey—*Fl. Hib.* '36.
11	Kilkny.	Nore above Ballyragget '99, and c. in Barrow—P.
13	Carlow	Goresbridge '99, &c.: common in Barrow—P.
14	Queen's	Graigue '99, &c.: common in Barrow—P.
15	Galw. SE.	Lough Derg '81 (Bolton King)—*Hb.* A. Bennett.
16	Galw. W.	L. Cregduff '85—Linton *502*. Cong—M. & S. *545*.
17	Galw. NE.	Near Ballindooly '99, and f. in River Suck—P.
19	Kildare	River Barrow at Mageney '99—P.
21	Dublin	River Liffey near Lucan '00: rare—Colgan.
22	Meath	Boyne near Navan '93, Scully—B.E.C. '93 *162*.
23	Westmth.	Lough Owel—Levinge '94 *484*.
24	Longfd.	Lough Gowna '00—P.
25	Roscomn.	Frequent in River Suck '97–8—P.
26	Mayo E.	Cong and south end of Lough Mask '95—M. & S. *545*.
27	Mayo W.	West of Castlebar '99—Marshall.
29	Leitrim	Glenade Lake '99—P.
32	Monaghn.	Lakes in Monaghan, Whitla—*Fl. Ulst.* '64.
33	Ferman.	Lower Lough Erne frequent '81–2—Barrington *108*.
34	Dongl. E.	Loughinn River and Pettigoe—*Fl. Don.*
35	Dongl. W.	Gweedore, &c: throughout, rare—*Fl. Don.*
37	Armagh	Lough Ross '92—P. Lough Neagh! Lett—P. *701*.
38	Down	Ballynahinch 1813, Templeton—*Fl. NE.*
39	Antrim	L. Neagh below Glenavy '00—B.N.F.C. *143*. Rare.
40	L'derry	Kilrea '93 and elsewhere in R. Bann—P.

Typical in the lakes, var. *graminifolius* frequently in the rivers.

Potamogeton nitens Weber.

Census 19—East 5, Centre 5, West 9.

1	Kerry S.	Castlegregory '94—Scully.
2	Kerry N.	Killarney '99—Scully.
6	Waterfd.	River Blackwater at Cappoquin '99—P.
11	Kilkny.	River Nore at Inistioge '00—Phillips.
14	Queen's	River Barrow above Monasterevan '84—Hart *387*.
16	Galw. W.	Ross Lake '99—P.
17	Galw. NE.	Grange River near Tuam '99—P.
18	King's	Black River above Monasterevan '84—Hart.
19	Kildare	River Barrow above Monasterevan '84—Hart *387*.
23	Westmth.	Lough Deravaragh—Levinge '94 *484*.
27	Mayo W.	L. Conn S. of Derreen '00—P. Achill I.—More *623*.

28	Sligo	Ballysadare '00—P.
29	Leitrim	Lough Bofin '71 (W. T. Dyer) *Hb.* Brit. Mus.—*Cyb.* II.
32	Monaghn.	Castleblayney '00—Somerville.
33	Ferman.	Lower Lough Macnean '00—P.
34	Dongl. E.	River Erne below Cliff—*Fl. Don.*
35	Dongl. W.	Fanet and near Lough Gartan—*Fl. Don.*
38	Down	L. Aghery '87, Annsboro' L., Stewart—*Fl. NE.* & *874.*
39	Antrim	Dunadry '84 (Stewart)—*Hb.* A. Bennett.

Potamogeton lucens L.

Census 28—East 9, Centre 9, West 10.

2	Kerry N.	Killarney '99: very local—Scully.
3	Cork W.	Inchigeela '00—Phillips.
4	Cork Mid	Carrigaline, River Lee (Alexander)—Power *Fl.* '45.
7	Tipp. S.	River Suir below Thurles '82—Hart *385.*
8	Limrck.	Limerick '97, Bentley—*Hb.* L.F.C.!
9	Clare	Annacarriga '96—Colgan. Killaloe '80—Hart *369.*
10	Tipp. N.	Portumna '97—P. And in Lough Derg, rare.
13	Carlow	River Slaney below Tullow '81—Hart *371.*
15	Galw. SE.	Woodford R. mouth '96—Colgan. Portumna—Phillips.
17	Galw. NE.	Terryland River '99 and River Suck—P.
18	King's	Clonmacnoise '99—P. Shannon, Brosna, and Barrow.
20	Wicklow	Lough Dan, &c.—*Guide* '78.
21	Dublin	River Liffey near Leixlip '94: local—Colgan.
22	Meath	Oldcastle '96—P.
23	Westmth.	L. Deravaragh, L. Owel, L. Ennel—Levinge '94 *484.*
24	Longfd.	Canal at Killashee '00, and in Lough Ree—P.
26	Mayo E.	Claremorris and Callow Lough '00—P.
27	Mayo W.	West of Castlebar '99—Marshall. Lough Conn '00—P.
28	Sligo	Ballysadare '00—P. Lough Gill, Dickie—*Fl. Ulst.*
29	Leitrim	Lough Melvin '99—P.
32	Monaghn.	Drumreaske '00—Waddell.
33	Ferman.	Upper and Lower L. Erne, c., '81-2—Barrington *108.*
34	Dongl. E.	Roshin Lough, &c.: extreme south only—*Fl. Don.*
35	Dongl. W.	L. Fern, L. Eske, &c.: north and south—*Fl. Don.*
37	Armagh	Loughgall '92—P. Frequent.
38	Down	Frequent in Newry Canal '73—Stewart.
39	Antrim	Lagan Canal f. '94—Stewart. L. Neagh c.—*Fl. NE.*
40	L'derry	Magilligan '94—Mrs. Leebody. Frequent—*Fl. NE.*

Potamogeton decipiens Nolte.

Census 5—East 2, Centre 1, West 2.

21	Dublin	R. Liffey near Leixlip '94 (Praeger): rare—Colgan.
22	Meath	River Boyne near Navan '97, Scully—*Cyb.* II.
23	Westmth.	Lough Deravaragh '95—Linton *503*.
34	Dongl. E.	North-east of Ballyshannon—*Fl. Don.*
35	Dongl. W.	Rathmullan—*Fl. Don.*

Potamogeton Zizii Roth.

Census 22—East 7, Centre 5, West 10.

1	Kerry S.	River Laune '88—Scully.
2	Kerry N.	Killarney '94—Scully.
8	Limrck.	Near Askeaton '86 (Stewart)—*Hb.* A. Bennett.
9	Clare	Lough Senan '85–6—Stewart *863*.
11	Kilkny.	River Nore at Thomastown '98—P.
16	Galw. W.	About Cong, L. Corrib near Maam, '95—M. & S. *545*.
17	Galw. NE.	River Suck in several places '96–7—P.
22	Meath	Boyne at Bective abundant '96—P.
23	Westmth.	Lough Ree (B. & V. '85–6), Lough Drin, Lough Deravaragh—Levinge '94 *484*.
25	Roscomn.	River Suck at Mt. Talbot &c. '97—P. L. Ree—*113*.
26	Mayo E.	About Cong '95—M. & S. *545*.
27	Mayo W.	Westport '99—Marshall.
28	Sligo	River at Sligo '84—B. & V. *112*.
29	Leitrim	L. Melvin and R. Drowse '99—P. Glenade L.—*112*.
31	Louth	River Dee below Ardee '97—P.
33	Ferman.	Kesh Rivermouth '81—Barrington *108*. Carrick—*854*.
34	Dongl. E.	Drowse River '97—P. Pettigoe, Bundoran—*Fl. Don.*
35	Dongl. W.	Fanet and near Ramelton: rare—*Fl. Don.*
37	Armagh	Benburb and Callan '00—Davies. L. Neagh '92—P.
38	Down	Lagan Canal near Blaris '94—Stewart.
39	Antrim	Kilrea '96—Mrs. Leebody. Bann basin f.; L. Mourne.
40	L'derry	Kilrea '96—Mrs. Leebody. Bann basin only, rare.

Commoner in the west than elsewhere.

Potamogeton prælongus Wulf.

Census 12—East 3, Centre 3, West 6.

1	Kerry S.	Lough Acoose '92—Scully.
2	Kerry N.	Killarney '99—Scully. Blackwater, Taylor—*Cyb.* I.
8	Limrck.	Castleconnell and Plassy '34, Harvey—*Cyb.* II.

16	Galw.W.	Ballynahinch '81 (Bolton King)—*Hb.* A. Bennett.
22	Meath	Canal near Beauparc and Navan '00—P.
23	Westmth.	Lough Owel—Levinge '94 *484*.
26	Mayo E.	L. Mask '95—M. & S. *545*. Foxford, More—*Cyb.* I.
27	MayoW.	Lough Cullin, More—*Cyb.* I.
29	Leitrim	Carrickaport Lough '80 (Stewart)—*Hb.* A. Bennett.
35	Dongl.W.	Lough Finn and Mullaghderg Lough—*Fl. Don.*
39	Antrim	Rathlin Island '82—Stewart. Rare—*Fl. NE.*
40	L'derry	Lakes about Kilrea, D. Moore—*Cyb.* I.

Potamogeton perfoliatus L.

Divisions all, *except 17 Galway NE., 20 Wicklow, 31 Louth.* Frequent.

Potamogeton crispus L.

Divisions all, *except 1 Kerry South.* Generally frequent.

Potamogeton densus L.

Census 12—East 5, Centre 5, West 2.

2	Kerry N.	Blennerville '92—Scully. Killarney—*Cyb.* I.
6	Waterfd.	Carrickbeg '00—P.
7	Tipp. S.	Fethard '00—Phillips. Frequent.
8	Limrck.	Limerick '99—Somerville. Shannon only, local.
9	Clare	Killaloe '80—Hart *369*.
10	Tipp. N.	Dromineer '00—Phillips. Lough Derg frequent.
11	Kilkny.	Urlingford, Thomastown, Dunkitt, '98—P.
12	Wexford	Macmine '97—Marshall *539*. Enniscorthy—*Cyb.* I.
14	Queen's	Canal at Grattan aqueduct '97—P.
18	King's	Tullamore '99, Kilbeggan canal '96—P.
19	Kildare	Rathangan '98—P. Not rare in the Barrow.
21	Dublin	Canal near Lucan '00: local—Colgan.

Southern half of Ireland, local.

Potamogeton obtusifolius Mert. & Koch.

Census 20—East 10, Centre 4, West 6.

2	Kerry N.	Killarney '94—Scully.
3	Cork W.	Union Hall '96—J. Groves. Shepperton—Allin *Fl.*
4	Cork Mid	Ballyphehane '96: rare—Phillips.
5	Cork E.	Cork and Youghal '96: frequent—Phillips.

8	Limrck.	Lough Gur '00—P.
9	Clare	Farrihy Lake, P. B. O'Kelly—*Cyb.* II.
11	Kilkny.	Lough Cullin '99, Johnstown '98—P.
15	Galw. SE.	Rossmore '85—Linton *502*.
22	Meath	Whitewood Lough '97—P.
23	Westmth.	Near Athlone '98—P.
27	Mayo W.	Rathroeen Lough '00—P.
30	Cavan	Lough Ramor '96—P. Belturbet, D. Moore—*Cyb.* I.
31	Louth	Braganstown bog '97—P. Glack bog—Butler *185*.
32	Monaghn.	Castleblayney '00—Somerville. Frequent.
35	Dongl. W.	Ramelton '89—P. Near Killybegs, Milford—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles. Fymore—Hart *392*.
37	Armagh	Mullaghmore Lough '92 : frequent—P. *701*.
38	Down	Loughinisland '97—P. Rare—*Fl. NE.*
39	Antrim	Portmore, D. Moore—*Cyb.* I.
40	L'derry.	Killelagh Lough '94—P. Rare—*Fl. NE.*

Distinctly calcifuge. In the few of the above stations which are on the limestone, the plant grows in bog drains and pools where it is cut off from calcareous soils. Frequent in a few places only off the limestone.

Potamogeton Friesii Rupr. (*P. mucronatus* Schrad.)

Census 7—East 1, Centre 4, West 2.

5	Cork E.	Youghal bog, Phillips and Scully—*Cyb.* II.
8	Limrck.	Near Foynes '85–6—Stewart *863*.
15	Galw. SE.	Lough Derg near Portumna '85—Linton *502*.
16	Galw. W.	Roundstone '85—Linton *502*.
23	Westmth.	L. Deravaragh and L. Ennel '95—Levinge *486*.
26	Mayo E.	Claremorris Lake '96—Marshall *537*.
32	Monaghn.	Castleblayney Lake '00—Somerville.

Potamogeton pusillus L.

Divisions all. Frequent.

Potamogeton pectinatus L.

Census 28—East 12, Centre 7, West 9.

1	Kerry S.	Waterville '00 : rare—Scully.
2	Kerry N.	Near Tralee '94 : rather frequent—Scully.
3	Cork W.	Kilkern Lake '91 : frequent by the sea—Phillips.

5	Cork E.	Youghal '00 : rare—Phillips.
6	Waterfd.	Clonea marsh '82—Hart *384*.
8	Limrck.	Limerick '97, Bentley—*Hb.* L.F.C.!
9	Clare	Killaloe, Mount Shannon, '96—Colgan. Very rare.
10	Tipp. N.	Lough Derg at Dromineer '96—Colgan.
11	Kilkny.	Granny '98, and frequent in the Barrow—P.
12	Wexford	Near Wexford '96—Marshall *537*. S. coast—Hart *384*.
13	Carlow	Frequent in the Barrow '98—P.
14	Queen's	Frequent in the Barrow '99—P.
15	Galw. SE.	Kilcolgan estuary '99—P.
16	Galw. W.	Inishbofin '75—More *616*.
17	Galw. NE.	Pools east of Galway '99—P.
18	King's	Barrow below Portarlington '84—Hart *383*.
19	Kildare	Athy '97 : frequent in the Barrow—P.
20	Wicklow	Wicklow '97—P. Abundant on Murrough—*Guide* '78.
21	Dublin	Liffey near Knockmaroon '00 : local—Colgan.
23	Westmth.	Lough Ennel and Ballynegall Lakes—Levinge '94 *484*.
33	Ferman.	Carrick Lake '81—Stewart *854*.
34	Dongl. E.	About Inch—*Fl. Don.*
35	Dongl. W.	Kinnylough and Kindrum—*Fl. Don.*
36	Tyrone	By the Foyle '96—Miss Knowles.
37	Armagh	Lough Neagh frequent, and Newry, '92—P.
38	Down	Downpatrick '00—P. Frequent—*Fl. NE.*
39	Antrim	Carnlough River '85—P. Frequent—*Fl. NE.*
40	L'derry.	Eglinton '94—Mrs. Leebody. Coleraine—*Fl. NE.*

Potamogeton flabellatus Bab.

Census 20—East 7, Centre 7, West 6.

1	Kerry S.	Castlegregory '94—Scully.
2	Kerry N.	Lixnaw '90 : local—Scully.
3	Cork W.	Kilkern Lake '91—Phillips. Clonakilty—Allin *Fl.*
5	Cork E.	Youghal—Allin *Fl.* '83. Ballycotton, Fermoy—*Cyb.* I.
6	Waterfd.	River Suir near Clonmel, D. Moore—*Cyb.* I.
7	Tipp. S.	River Suir near Clonmel, D. Moore—*Cyb.* I.
8	Limrck.	Curragh Chase '00—P.
9	Clare	River Fergus at Ennis '86 (Stewart)—*Hb.* A. Bennett.
11	Kilkny.	Graiguenamanagh, &c. : f. in R. Barrow, '98—P.
12	Wexford	Macmine '97—Marshall *539*. Coast frequent.
13	Carlow	Milford, &c. : common in River Barrow '98—P.
14	Queen's	Frequent in the Barrow '98—P.

18	King's	Canal south of Edenderry '96—P.
19	Kildare	Canal near Straffan, J. Douglas—*Cyb.* I.
23	Westmth.	Shannon above Athlone '99—P.
24	Longfd.	R. Inny [mouth '85] (Barrington)—*Hb.* A. Bennett.
25	Roscomn.	Shannon at Athlone '99—P.
28	Sligo	Ballysadare '97—P. Glencar Lake—B. & V. *112.*
31	Louth	Pools at Greenore '00—P.
34	Dongl. E.	Near Ballyshannon—*Fl. Don.*

Apparently commoner in the south than the north. Not always separated from *P. pectinatus*, and no doubt more frequent than the above records show.

Potamogeton filiformis Nolte.

Census 10—East 1, Centre 5, West 4.

16	Galw. W.	South end of Lough Mask, floating, '95—Marshall.
23	Westmth.	Lough Ree ('85–6, B. & V.)—Levinge *484.*
24	Longfd.	Priest's Island in Lough Ree '99—P.
25	Roscomn.	Galey on Lough Ree '97—P.
26	Mayo E.	Lough Cullin at outlet '64, More—*Cyb.* II.
27	Mayo W.	L. Cullin near Pontoon '00—P., and at outlet—*Cyb.* I.
29	Leitrim	Annaghearly Lough and Lough Melvin '99—P.
33	Ferman.	Garrison '00—P. Near Kesh—Barrington *108.*
35	Dongl. W.	Kinnylough—*Fl. Don.*
37	Armagh	Lough Neagh at Ardmore Point '92—P.

Northern half of Ireland, in lakes chiefly on the limestone.

Ruppia spiralis Hartm. Tassel Pondweed (genus).

Census 8—East 5, Centre 0, West 3.

1	Kerry S.	Castlegregory '94 : rare—Scully.
2	Kerry N.	Barrow Harbour '92 : rare—Scully.
12	Wexford	Wexford Hbr. '97—Marshall *539.* Courtown '94—P.
21	Dublin	Head of Malahide estuary '93—Colgan *207.*
35	Dongl. W.	Mulroy House—*Fl. Don.*
38	Down	Castle Espie '00—P. Rather frequent.
39	Antrim	Magheramorne '97—Stewart. South only—*Fl. NE.*
40	L'derry	Carrickhugh '93—Mrs. Leebody.

Commoner in the north-east than *R. rostellata.*

Ruppia rostellata Koch.

Census 21—East 9, Centre 1, West 11.

1	Kerry S.	Derrynane '00: frequent—Scully.
2	Kerry N.	Near Ballybunnion '94: frequent—Scully.
3	Cork W.	Skibbereen, &c., '96: frequent—Phillips.
4	Cork Mid	Rochestown '98: frequent—Phillips.
5	Cork E.	Dunkettle and Youghal '00: frequent—Phillips.
6	Waterfd.	Dungarvan and Tramore '99—P. Clonea—Hart *384*.
8	Limrck.	Foynes '85-6—Stewart *863*.
9	Clare	Lehinch '00—R. D. O'Brien! Kilrush—Stewart *863*.
12	Wexford	Wexford Hbr. c. '97—Marshall. Raven Point—*384*.
15	Galw. SE.	Kilcolgan and Oranmore '99—P.
16	Galw. W.	Seaweed Point near Barna '99—P.
17	Galw. NE.	Ballyloughaun '99—P.
20	Wicklow	Arklow '94—P.
21	Dublin	Near Corballis '00: local—Colgan.
27	Mayo W.	Newport '99—Marshall.
28	Sligo	Ballysadare '97—P.
31	Louth	Greenore '00—P.
34	Dongl. E.	Mouth of the Erne, Vowell—*Cyb.* II.
35	Dongl. W.	Letterkenny, Glen Bay, &c.: frequent—*Fl. Don.*
38	Down	Blackstaff Bridge near Kircubbin '90—P.
40	L'derry	Mouth of River Bann '94—P.

Commoner in the south than in the north.

Zannichellia palustris L. Horned Pondweed.

Census 17—East 8, Centre 4, West 5.

2	Kerry N.	Near Tralee '94: rare—Scully.
3	Cork W.	Skibbereen '96: frequent on the coast—Phillips.
4	Cork Mid	Blackrock '98: frequent near the sea—Phillips.
5	Cork E.	Youghal and Glanmire '00: frequent—Phillips.
6	Waterfd.	Clonea '82—Hart *384*.
8	Limrck.	Rinekirk '85-6—Stewart *863*.
9	Clare	Inishmore '90—Nowers and Wells *651*.
12	Wexford	Wexford '97—Marshall. Frequent on south coast.
20	Wicklow	West of Wicklow (J. Ball)—Briggs '76 *506*.
25	Roscomn.	Near Kiltoom on Lough Ree '85-6—B. & V. *113*.
26	Mayo E.	Cong '95—M. & S. *545*.
34	Dongl. E.	Buncrana (J. Hunter), Inch—*Fl. Don.*

35 Dongl. W. Glen Head—*Fl. Don.*
36 Tyrone By the Foyle '96—Miss Knowles. Ardtrea—*Fl. Ulst.*
38 Down Holywood, G. Dickie—*Fl. Ulst.* '64.
39 Antrim River Lagan, Corry—*Fl. NE.*
40 L'derry Portstewart '00—Miss Knowles. Frequent.

The stations given for 2, 12, 20, 36 refer to *Z. palustris, sensu restricto.* Some of the other records may be referable to one or other of the following segregates.

Z. brachystemon Gay.

Census 5—East 2, Centre 1, West 2.

2 Kerry N. Castleisland '88, Scully—*Cyb.* II
9 Clare Slieve Elva '96, Colgan—*Cyb.* II.
10 Tipp. N. Dromineer harbour '96—Colgan.
21 Dublin Near Portrane '00: local—Colgan.
38 Down Near Kircubbin '90—P. Downpatrick '80—Stewart.

Z. pedunculata Reichb.

1 Kerry S. Castlegregory '94: rather rare—Scully.
2 Kerry N. Banna '92: rather frequent—Scully.
20 Wicklow Wicklow '97—P.

Z. polycarpa Nolte.

38 Down Victoria Park '99—P. Behind Queen's Quay—Stewart.

Zostera marina L. Grass-wrack.

Maritime and sub-maritime divisions all *except 29 Leitrim*, namely:—1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16, 17, 20, 21, 22, 27, 28, 31, 34, 35, 36, 37, 38, 39, 40. Common on muddy shores.

Zostera nana Roth.

Census 7—East 3, Centre 0, West 4.

2 Kerry N. Spa '94—Scully.
12 Wexford Locally abundant in Wexford Harbour '97—Marshall.
16 Galw. W. Gentian Hill! '00—Phillips.
21 Dublin Portmarnock '97—Hart *403*. Baldoyle, More—*Cyb.* I.
22 Meath Nanny River at Laytown '96—P.
34 Dongl. E. Trawbreaga Bay '98—Hart *405*.
35 Dongl. W. Ards abundant—*Fl. Don.*

Further exploration of mud-flats will probably yield other stations.

Naias flexilis Rostk.

1 Kerry S. Glencar '99—Scully. Lough Caragh '96, Scully—*Cyb.* II.
2 Kerry N. Killarney '99: south only, very rare—Scully.
16 Galw. W. Lough Cregduff '96—P.

Eriocaulon septangulare With. Pipewort.

Census 7—East 0, Centre 0, West 7.

1 Kerry S. Cloonee '00: rare, but locally abundant—Scully.
3 Cork W. Lough NW. of Adrigole '84—Hart *388*.
9 Clare Monmor bog '45—Carter *195*.
16 Galw. W. Glen Inagh '98—Colgan. Throughout, frequent.
17 Galw. NE. Wet bog near Killower Lough '99—P.
27 Mayo W. Newport '99—Marshall. South half, locally frequent.
35 Dongl. W. Portnoo '00—Mrs. Leebody. Frequent in Boylagh barony—*Fl. Don.*

Ranging up the whole west coast, but avoiding the limestone tracts.

Eleocharis acicularis R. Br.

Census 23—East 8, Centre 10, West 5.

1 Kerry S. River Laune '88—Scully.
2 Kerry N. Killarney '99: rare—Scully.
9 Clare Inchiquin L. '99—Miss Knowles. Shekamore Lough.
10 Tipp. N. Near Portumna bridge—Mackay 1806 *521*.
14 Queen's Portarlington '97: canals only, frequent—P.
15 Galw. SE. Lough Derg near Portumna, D. Moore—*Cyb.* I.
18 King's Philipstown '96: throughout Grand Canal—P.
19 Kildare Rathangan '98: canals only, frequent—P.
21 Dublin Canal near Lucan '00: local—Colgan.
22 Meath Canal at Enfield '96—P.
23 Westmth. Canal near Kenny '99—P.
24 Longfd. Lough Gowna, and canal at Ballymahon, '00—P.
25 Roscomn. Lough Ree near Clooneigh River '85-6—B. & V. *113*.
30 Cavan Lough Oughter '96—P.
31 Louth Pool at Clogher Head '96—P.
32 Monaghn. Canal at Bessmount '00—Waddell.
33 Ferman. Knockninny '00—Tetley! Lower L. Erne frequent.
34 Dongl. E. River Erne opposite Camlin—*Fl. Don.*
36 Tyrone Canal at Strabane—Murphy '29 *629*.
37 Armagh Lurgan lake '00—Davies. North only, rare—P. *701*.

38	Down	Lough Neagh at Annaghdroughal (Lett)—S. & P. *874*.
39	Antrim	L. Beg '95—P. Lagan canal, L. Neagh, R. Bann, f.
40	L'derry	L. Beg '98—Druce. Frequent in L. Beg and R. Bann.

In various lakes and rivers near the margin and north of the island. From the Shannon, presumably, it has spread along the canals all over the Central Plain. Mr. Phillips considers that the Cork records (*287*, *682*) are probably errors.

Eleocharis palustris R. Br.

Divisions all. Common.

Eleocharis uniglumis Link.

Census 10—East 6, Centre 1, West 3.

1	Kerry S.	Ballydavid Head '91, Butler—*Cyb.* II. Very rare.
8	Limrck.	Limerick '99—Somerville.
12	Wexford	Macmine, &c. '97—Marshall *539*. South coast f.
20	Wicklow	Newcastle '94—P. Arklow—More *604*.
21	Dublin	Raheny '00: rare—Colgan.
27	Mayo W.	Newport '99—Marshall.
31	Louth	Salt-marsh at Soldier's Point '96—P.
34	Dongl. E.	Ballyshannon estuary—*Fl. Don.*
38	Down	Groomsport '00, Killough—Davies *272*, *265*. Bangor.
40	L'derry	Magilligan '95—P.

Eleocharis multicaulis Smith.

Census 30—East 11, Centre 7, West 12.

1	Kerry S.	Killarney '99: frequent—Scully.
2	Kerry N.	Killarney '99: rather frequent—Scully.
3	Cork W.	Millstreet '00: common—Phillips.
4	Cork Mid	Donoughmore '96: frequent—Phillips.
5	Cork E.	Near Rathcooney '98: common—Phillips.
7	Tipp. S.	Muskry Lough in the Galtees '00—P.
9	Clare	Monmor bog '85–6—Stewart *863*.
11	Kilkny.	Lough Cullin '99, Brandon Hill '98—P.
12	Wexford	Ballyhyland frequent, Alderton—B. & M. '93 *103*.
13	Carlow	Blackstairs '99—P. Mount Leinster—Hart *381*.
15	Galw. SE.	Near Loughrea '00—Phillips.
16	Galw. W.	Muckanaght '98—Colgan. Common.
17	Galw. NE.	Killower Lough '99, Dunmore '00—P.

18	King's	Geashill '96—P.
20	Wicklow	Callary bog '93—P.
26	Mayo E.	Ballymore Lough '00—P.
27	Mayo W.	Mallaranny '99—Marshall. Frequent.
28	Sligo	Ballysadare '00—P. North and west, rare.
29	Leitrim	Lough Scur '84—Stewart *859*.
30	Cavan	Lough Oughter '96—P.
31	Louth	Carlingford Mountain '83—Hart *381*.
32	Monaghn.	Bragan, Kilmore L., '00—Waddell. Drum—More *614*.
33	Ferman.	South of Belleek '00—P.
34	Dongl. E.	Glengad Head '98—Hart *405*. Frequent—*Fl. Don.*
35	Dongl. W.	Muckish, &c.: frequent throughout—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Loughadian and frequent on bogs in north '92—P.
38	Down	Saintfield '99—Waddell. Rare: common on Mournes.
39	Antrim	Fair Head '97—P. Rare—*Fl. NE.*
40	L'derry	Coleraine, Stewart; mouth of Roe, D. Moore—*Fl. NE.*

A local plant, occurring chiefly in the mountainous parts of the country, and off the limestone.

Scirpus pauciflorus Lightf.

Census 33—East 10, Centre 12, West 11.

1	Kerry S.	Cloonee '98—P. Frequent—Scully.
2	Kerry N.	Banna '94: rather rare—Scully.
7	Tipp. S.	Farranaleen and Fethard '98—P.
9	Clare	Carrowgar Bay on Lough Derg '96—Colgan.
10	Tipp. N.	Dromineer '00—Phillips. Rapla, Thurles—P.
11	Kilkny.	Thomastown, Urlingford, Johnstown, '98—P.
13	Carlow	Above Borris '99, below St. Mullin's '98—P.
14	Queen's	Rathdowney and Dunmore '98—P.
15	Galw. SE.	Loughrea '98—P. Frequent in the south.
16	Galw. W.	Inveran '96—Colgan. East margin frequent.
17	Galw. NE.	Barbersfort '99: common—P.
18	King's	Kinnitty '00, Geashill, Lough Goura—P.
19	Kildare	Rathangan '98, Nurney, Kildare, Leixlip—P.
21	Dublin	North Bull '00—P. Frequent—Colgan.
22	Meath	Enfield '96, Laytown '95—P.
23	Westmth.	Glynnwood '99—P. Lough Ree c., centre f.
24	Longfd.	Lough Ree below Ballymahon '00—P.
25	Roscomn.	Near Athlone '98—P.

26 Mayo E. Claremorris '00—P.
27 Mayo W. Mallaranny '99—Marshall. Frequent.
28 Sligo Ballysadare '00—P. Widespread.
29 Leitrim Glenade '99: frequent in the north—P.
30 Cavan Mount Nugent '96—P.
31 Louth Greenore '00—P.
32 Monaghn. Castleblayney Lake, Templeton—*Fl. Ulst.* '64.
33 Ferman. Belcoo '00—P. Lower L. Erne rare—*108* and P.
34 Dongl. E. Trawbreaga Bay, &c.: in N. and S.—*Fl. Don.*
35 Dongl. W. Adara, &c.: local—*Fl. Don.*
36 Tyrone Omagh '96—Miss Knowles.
37 Armagh Bogs in the north rare '92—P.
38 Down Bloody bridge '94—Waddell. Very rare—*Fl. NE.*
39 Antrim Rathlin Island '82—Stewart. Rare—*Fl. NE.*
40 L'derry Mouth of River Bann '95—P.

A local plant, commoner on than off the limestone. Apparently absent from the south-east.

Scirpus cæspitosus L.

Divisions all. Locally abundant.

Scirpus parvulus R. & S.

2 Kerry N. River Cashen near Ballybunnion '89—Scully.
20 Wicklow Arklow '96—Barrington!

Scirpus fluitans L.

Census 34—East 15, Centre 9, West 10.

Divisions all, *except 8 Limerick, 23 Westmeath, 28 Sligo, 29 Leitrim, 33 Fermanagh, 36 Tyrone.* Frequent, and probably universal. Rather calcifuge.

Scirpus Savii S. & M.

Census 26—East 14, Centre 2, West 10.

1 Kerry S. Derrynane '00: frequent—Scully.
2 Kerry N. Near Ballybunnion '94: frequent—Scully.
3 Cork W. Baltimore '96: frequent near the coast—Phillips.
4 Cork Mid Crosshaven '96: frequent—Phillips.
5 Cork E. Glanmire '00: frequent—Phillips.
6 Waterfd. Tramore '99—P.
8 Limrck. Foynes '85–6—Stewart *863*.

9	Clare	Doonbeg '85–6—Stewart *863*. Rare.
11	Kilkny.	Snowhill '99, Granny—P. Ballinlaw—B. & G. *100*.
12	Wexford	Wexford Harbour '81—Hart *371*. S. coast frequent.
13	Carlow	Barrow below St. Mullin's '98—P.
15	Galw. SE.	Kilcolgan '99—P.
16	Galw. W.	Inveran '96—Colgan. Not common.
20	Wicklow	Brittas Bay '96, Great Sugarloaf '94—P.
21	Dublin	Near Skerries '95: local—Colgan.
22	Meath	Laytown '96—P.
27	Mayo W.	Mallaranny '99—Marshall. Frequent.
28	Sligo	Dromore West '96—Colgan. Mullaghmore—*Fl. Ulst.*
31	Louth	Dunany Point '96—P.
34	Dongl. E.	Mournebeg River, &c.: throughout, c. in N.—*Fl. Don.*
35	Dongl. W.	Horn Head, &c.: frequent—*Fl. Don.*
36	Tyrone	River Foyle '96—Miss Knowles.
37	Armagh	Estuary of Newry River '92—P.
38	Down	Glasdrumman '97—P. Rare—*Fl. NE.*
39	Antrim	Rathlin Island '94—P. Rare—*Fl. NE.*
40	L'derry	Castlerock '89—P. Rare—*Fl. NE.*

Round almost the whole coast. Very rarely beyond tidal influence, in Kerry (850 feet, Hart), Wicklow (700 feet, P.), and Donegal East (300–550 feet).

Scirpus setaceus L.

Divisions all, *except 19 Kildare, 31 Louth.* Thinly distributed over almost the whole country, and no doubt occurs in all divisions.

Scirpus lacustris L. Bullrush.

Divisions all *except 6 Waterford*, in which, if present, it is apparently rare. Generally abundant.

Scirpus Tabernæmontani Gmel.

Maritime and submaritime divisions all, *except 29 Leitrim*: namely, 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16, 17, 20, 21, 22, 27, 28, 31, 34, 35, 36, 37, 38, 39, 40. Frequent along the coast. Inland on Lough Neagh (*Fl. NE.*).

Scirpus triqueter L.

8	Limrck.	Shannon at Limerick! and abundant for five miles down stream, '00—R. D. O'Brien.
9	Clare	Abundant in the Shannon for five miles below Limerick, and sparingly in Cratloe Creek, '00—R. D. O'Brien.

Scirpus maritimus L.

Maritime and submaritime divisions all, including Kilkenny, Tyrone, and Armagh. Common round the coast. Inland on Lough Neagh (*Fl. NE.*).

Scirpus sylvaticus L.

Census 16—East 7, Centre 7, West 2.

4	Cork Mid	Between Cork and Carrigrohane '98—Phillips.
5	Cork E.	Castletownroche '00 : rare—Phillips.
6	Waterfd.	By the Blackwater above Lismore '84—Hart *388*.
7	Tipp. S.	R. Suir at Cloughabready and near Cahir '82—Hart *385*.
8	Limrck.	Plassy, I. Carroll—*Cyb.* I.
9	Clare	Parteen '00—R. D. O'Brien!
14	Queen's	River Barrow at Two-mile bridge '84—Hart *383*.
18	King's	Barrow at Garryhinch, and further down, '84—Hart *383*.
32	Monaghn.	Drumreaske and Rossmore '00—W. de V. Kane!
33	Ferman.	Near Enniskillen, O'Beirne—Mackay '25 *522*.
34	Dongl. E.	Donagh R. '98—Hart *405*. Widespread, v.r.—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles. Favour Royal—Hart *392*.
37	Armagh	Clare '92—P. Frequent in north, rare in south.
38	Down	Killyleagh '97—P. Rare—*Fl. NE.*
39	Antrim	Cullybackey '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Kilrea '94—P. Frequent in south and east.

Very local : chiefly in the south and north ; rare in the west.

Scirpus rufus Schrad. (*Blysmus rufus* Panz.)

Census 12—East 5, Centre 0, West 7.

1	Kerry S.	Derrynane '89 : rare and local—Scully.
2	Kerry N.	Rahaneen '92 : very local—Scully.
12	Wexford	North side of Wexford Harbour '81—Hart *371*.
16	Galw. W.	Custrower Bay near Ballynahinch—Wade 1804 *902*.
21	Dublin	North Bull '00 : local—Colgan.
27	Mayo W.	Killala and Rosserk abbey '00—P.
28	Sligo	Ballysadare '97—P. Drumcliff R. (Corry)—B. & V. *112*.
34	Dongl. E.	Tullagh '98—Hart *405*. N. and S., local—*Fl. Don.*
35	Dongl. W.	Killybegs '96—P. Throughout, local—*Fl. Don.*
38	Down	Killough '98—Davies *265*. Frequent—*Fl. NE.*
39	Antrim	Ballintoy '95—Brenan *168*. Rare—*Fl. NE.*
40	L'derry	Mouth of R. Roe '97—Mrs. Leebody. Local—*Fl. NE.*

Very local round the coast, with wide gaps between some of the stations.

Eriophorum vaginatum L. Cotton-grass (genus).

Divisions all, *except 6 Waterford*, in which it no doubt occurs. Frequent.

Eriophorum angustifolium Roth.

Divisions all. Common.

Eriophorum latifolium Hoppe.

Census 9+(1)—East 2+(1), Centre 1, West 6.

1 Kerry S. Glencar '99 : rare and local—Scully.
2 Kerry N. Tarbert '90—Scully.
3 Cork W. North of Adrigole, Scully—*Cyb.* II.
7 Tipp. S. Aughakilleen below Holycross '82—Hart *385*.
15 Galw. SE. Woodlawn (E. Hill)—Babington '36 *54*.
16 Galw.W. North-west side of Urrisbeg '69—More *614*.
19 Kildare Marsh north of the Curragh '97—P.
(20 Wicklow Enniskerry—*Fl. Hib.* '36. Long extinct.)
35 Dongl.W. North-west of Ardara—*Fl. Don.*
39 Antrim Flow bog near Rasharkin, D. Moore—*Cyb.* I.

Rhynchospora fusca R. & S.

Census 19—East 0, Centre 8, West 11.

1 Kerry S. Cloonee '98—P. F. and locally abundant—Scully.
2 Kerry N. Listowel '94 : frequent in south, rare in north—Scully.
3 Cork W. Adrigole and Glengariff '94—Phillips. West, rare.
7 Tipp. S. Oldtown bog near New Birmingham, Vowell—*Cyb.* II.
9 Clare Dunbeg bog, D. Moore—*Cyb.* I.
10 Tipp. N. Near Portumna '00—Phillips. Barracurra '97—P.
15 Galw. SE. By Lough Derg below Woodford '98—P.
16 Galw.W. Glen Inagh '98—Colgan. Common in the east.
17 Galw. NE. Tuam district frequent '99, Clonbrock '96—P.
18 King's Lough Boora '00 : frequent in the west—P.
23 Westmth. Twy Lough near Athlone '98—P.
24 Longfd. Roosky to Inny mouth : common in the west, '00—P.
25 Roscomn. East of Slieve Bane '00, Athlone '98—P.
26 Mayo E. Claremorris '00—P. Frequent in west half.
27 Mayo W. Nephin '00—P. Castlebar—Marshall. Foxford.
28 Sligo Behind Cliffony '00—P.
29 Leitrim Uragh L. near Kinlough, Dromod, Rinn L., '99—P.
33 Ferman. Near Florencecourt '00—P.
34 Dongl. E. Near Belleek '00—P.

Western half of Ireland.

Rhynchospora alba Vahl.

Census 36—East 12, Centre 12, West 12.

Divisions all, *except 6 Waterford, 12 Wexford, 21 Dublin, 32 Monaghan.* Probably Dublin is the only division from which this plant is actually absent. Its distribution coincides with that of low-level peat-bogs. One station only in Carlow and Kilkenny. Very rare on mountain bogs. Much rarer in the east than in the west.

Schœnus nigricans L.

Divisions all, *except 6 Waterford;* probably universal. Frequent.

Cladium Mariscus R. Br.

Census 28+(1)—East 8+(1), Centre 8, West 12.

1	Kerry S.	Cloonee '00: rather frequent—Scully.
2	Kerry N.	Killarney '99: chiefly in the south—Scully.
3	Cork W.	Inchigeela '00—Phillips. Frequent in the west.
4	Cork Mid	Blarney—Power *Fl.* '45. Summerstown—*287*.
9	Clare	Ennistymon '99—Miss Knowles. Rare.
13	Carlow	S. of Carlow '98—P. Tullow (Browne)—More *614*.
15	Galw. SE.	Marble Hill '98—P. Throughout, frequent.
16	Galw.W.	Glen Inagh '98—Colgan. Common.
17	Galw. NE.	Annaghdown '00: common on Lough Corrib—P.
18	King's	Frankford '00, Pallas Lough, Lough Goura—P.
19	Kildare	Marsh N. of Curragh v. c. '97—P. Dollardstown.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.
22	Meath	L. Sheelin '96, Ardee bog '97—P. And in E., v. r.
23	Westmth.	Ballinderry Lough '99—P. Lough Ree c., centre f.
24	Longfd.	Derrymacar Lough '00—P.
25	Roscomn.	Rockville '99: throughout, frequent—P.
26	Mayo E.	Callow '00—P. Frequent in the west.
27	Mayo W.	Lough Conn '00—P. Locally frequent.
28	Sligo	Lough Arrow '97—P.
29	Leitrim	Uragh Lough and Glenade '99—P.
30	Cavan	Lakes in Cavan, D. Moore—*Cyb.* I., and Templeton.
31	Louth	Near Castlebellingham '90—Butler *185*.
32	Monaghn.	Drumreaske '00—Kane. Dartrey '00—Somerville.
33	Ferman.	Heathery Island in Lough Melvin '00—P.
34	Dongl. E.	Lough Naminn and frequent in south—*Fl. Don.*
35	Dongl. W.	Portnoo '00—Mrs. Leebody. Chiefly in S., f.—*Fl. Don*,
37	Armagh	Loughgall '92—P.

38 Down Near Killough '00, Strangford, Castlewellan—P.
(39 Antrim Lough Neagh at Portmore and Selshan—*Fl. NE.*, &c. ? Extinct.)

Rare in the east; locally common in the west.

Carex dioica L. Sedge (genus).

Census 20—East 7, Centre 4, West 9.

1 Kerry S. Glencar '99: frequent but local—Scully.
2 Kerry N. Lough Guitane '90: rather frequent—Scully.
3 Cork W. Priest's Leap '78—Allin *Fl.* Inchigeela—*287*.
9 Clare Near Crusheen '79—Corry *240*.
16 Galw. W. Clonbur '95—Marshall.
20 Wicklow Devil's Glen '00—C. Waterfall.
21 Dublin Three Rock Mountain '95—Colgan.
23 Westmth. Loughanstown, Lisclogher bog—Levinge '94 *484*.
26 Mayo E. Glendaduff and near Claremorris '00—P.
27 Mayo W. Mallaranny '99—Marshall. Widespread, rare.
28 Sligo Ballysadare '00—P. Truskmore—B. & V. *112*.
31 Louth Carlingford Mountain '00—P.
32 Monaghn. Mullyash Hill '00—Somerville.
34 Dongl. E. Bulbein Mount, &c.: in north and south—*Fl. Don.*
35 Dongl. W. Glenties, &c.: throughout, local—*Fl. Don.*
36 Tyrone Strabane '00—Miss Knowles. Killeter—Stewart.
37 Armagh Slieve Gullion '92—P.
38 Down Bloody Burn '97—P. Frequent—*Fl. NE.*
39 Antrim Ballymena '99—Miss Knowles. Frequent—*Fl. NE.*
40 L'derry Draperstown, D. Moore: frequent—*Fl. NE.*

Rare, and generally on mountains.

Carex pulicaris L.

Divisions all. Common.

Carex pauciflora Lightf.

39 Antrim Mountains above Carnlough '98—Adams *3*. Parkmore '89—Lett *476*.

Carex divisa Huds.

12 Wexford Fisherstown marshes abundant '93, Miss Glascott—B. & M. *MS*. Not rare in the Barrow estuary.
21 Dublin East Wall in Dublin Harbour '94—Colgan. North bank of the River Liffey only, very rare.

The Cork and Connemara records have never been confirmed.

Carex disticha Huds.

Divisions all. Generally common, but very rare in Kerry, Cork, and in the greater part of Donegal.

Carex arenaria L.

In all divisions where sandy coasts occur: namely 1, 2, 3, 4, 5, 6, 9, 12, 16, 17, 20, 21, 22, 27, 28, 31, 34, 35, 38, 39, 40.

Carex teretiuscula Good.

Census 30—East 9, Centre 11, West 10.

1	Kerry S.	Castlegregory '90—Scully. Gallarus '83—Hart *381*.
2	Kerry N.	Near Spa '90—Scully.
7	Tipp. S.	Ballinure and south of Cashel '98—P.
8	Limrck.	Lough Gur! '00—O'Brien. Limerick '99—Somerville.
9	Clare	Dunbeg bog, D. Moore—*Cyb.* I.
10	Tipp. N.	Lough Ourna '99: frequent in northern half—P.
11	Kilkny.	Johnstown '98—P.
12	Wexford	East of Wexford '97—Marshall *539*.
14	Queen's	Abbeyleix '98, Rathdowney, Portarlington—P.
15	Galw. SE.	Loughrea '98, Marble Hill '97—P. Woodford—*Cyb.* I.
17	Galw. NE.	Castlegrove '99, Clonbrock '96—P.
18	King's	Lough Goura '98: frequent throughout—P.
19	Kildare	Nurney '97—P.
21	Dublin	Royal Canal near Lucan '00—Colgan.
22	Meath	Kildalkey '00, Mathews' Hill '97—P.
23	Westmth.	Lough Iron '99—P. Frequent.
24	Longfd.	Woodlawn '98, and frequent in the west—P.
25	Roscomn.	Athlone '98, Lough Gara '97—P.
26	Mayo E.	Claremorris '96—Marshall *537*. Hollymount—*Cyb.* I.
27	Mayo W.	Mallaranny, &c. '99—Marshall. Very local.
28	Sligo	Annaghmore '00: frequent—P.
29	Leitrim	Rinn Lough '99—P.
31	Louth	Ardee bog '97—P.
32	Monaghn.	Drumreaske '00—Waddell. Dartrey '00—Somerville.
34	Dongl. E.	About Ballyshannon and Pettigoe—*Fl. Don.*
35	Dongl. W.	Fanet, Dunfanaghy, Barra River—*Fl. Don.*
36	Tyrone	Lough Muck near Omagh '96—Miss Knowles.
38	Down	Near Giant's Ring '96—Davies *257*.
39	Antrim	Killymurry, D. Moore—*Cyb.* I. Very rare—*Fl. NE.*
40	L'derry	Killelagh Lough above Maghera '94—Mrs. Leebody.

The Cork record (*287*) is disallowed.

Carex paradoxa Willd.

23 Westmth. Ladiston, &c.—Levinge '94 *484*. Centre, rare.

Carex paniculata L.

Divisions all. Generally frequent, but rare in 17, 21, 28, 30, 31, 36.

Carex vulpina L.

Census 33—East 14, Centre 9, West 10.

Divisions all *except 13 Carlow, 16 Galway West, 17 Galway NE., 23 Westmeath, 25 Roscommon, 26 Mayo East, 32 Monaghan*. Rare in 18, 24, 30, 33, 36. More or less frequent in the remaining divisions. Though generally rare except near the sea, this is a plant of constant occurrence in South Tipperary and Queen's Co.

Carex muricata L.

Census 16+(1)—East 7+(1), Centre 4, West 5.

2	Kerry N.	Fenit '90 : very rare—Scully.
3	Cork W.	Near Kinsale '92 : rare—Phillips.
4	Cork Mid	Carrigaline '00 (Scully) : rare—Phillips.
5	Cork E.	Whitegate '00 : rare—Phillips.
7	Tipp. S.	Cahir and Knocklofty '00—P.
8	Limrck.	Limerick '99—Somerville.
9	Clare	Near Ballyvaughan, O'Kelly—*Cyb.* II.
10	Tipp. N.	Lough Ourna '99, Friar's Lough '98—P.
12	Wexford	Wexford '97—Marshall. Enniscorthy, Slaney—*Cyb.* I.
13	Carlow	Milford '98—P.
14	Queen's	Graigue '98—P. Shrule Castle '84—Hart *383*.
16	Galw. W.	Oughterard '35—Babington *51*.
19	Kildare	Grand Canal near Monasterevan '84—Hart *383*.
20	Wicklow	Fassaroe (Barrington)—More '72 *614*.
(21	Dublin	Stepaside, D. Moore—*Cyb.* I.; &c. ?—Colgan.)
28	Sligo	Rosses Point '97—P.
39	Antrim	Giant's Causeway '98—L. Watt! Near Belfast.

Almost confined to the southern half of Ireland.

Carex divulsa Good.

Census 19—East 9, Centre 6, West 4.

1	Kerry S.	Kenmare '90 : local—Scully.
2	Kerry N.	Killarney '99 : local, chiefly in south—Scully.

3	Cork W.	Bantry—Allin '71 *8*. Rather common—Allin *Fl.*
4	Cork Mid	Carrigaline '00 (Scully): common in south—Phillips.
5	Cork E.	Dunkettle '00: frequent—Phillips.
6	Waterfd.	Carrickbeg '00—Phillips. Cappoquin '99—P.
7	Tipp. S.	Cahir '00—P. South and west frequent.
8	Limrck.	Adare '99—R. D. O'Brien! Limerick '99—Somerville.
10	Tipp. N.	Lough Ourna '99—P.
12	Wexford	Courtown '94—P. Dunbrody Park—B. & G. *100*.
13	Carlow	Leighlinbridge '98—P. Tullow; Brown's Hill.
14	Queen's	Durrow '00—Phillips. Graigue '99—P.
15	Galw. SE.	Garryland '00—P.
18	King's	Shannon Harbour '98—P.
19	Kildare	Near Athy, Carroll; Lodge Park, Douglas—*Cyb.* I.
20	Wicklow	Wicklow '97—P. Common in the north-east.
21	Dublin	Portrane '00: local—Colgan.
22	Meath	Navan '00, Laytown '96—P.
23	Westmth.	Knock Ross '95—Levinge *486*.

Distributed almost without a break over the southern half of Ireland, being rare in the west.

Carex echinata Murr.

Divisions all. Common.

Carex remota L.

Divisions all. Frequent.

Carex axillaris Good.

4	Cork Mid	Near Kinsale '66 (I. Carroll)—More *614*.
14	Queen's	By the Barrow near Monettia bog '84—Hart *383*.
21	Dublin	Near Malahide '94—Colgan *211*.
25	Roscomn.	Near Rockville House '99—P. *797*.

Several old records are disallowed.

Carex Bœnninghausiana Weihe.

2	Kerry N.	Killarney '99—Scully.
35	Dongl. W.	Near Mount Charles '83–4—Hart *386*.

Carex elongata L.

33	Ferman.	Marsh near Crum Castle '81–2—Barrington *108*.
(39	Antrim	Lough Neagh at Selshan '38, D. Moore—*Cyb.* I. Extinct —*Fl. NE.*)

Carex curta Good.

Census 22—East 7, Centre 8, West 7.

2	Kerry N.	Duagh '94—Scully. River Finnow—Scully *824*.
7	Tipp. S.	Near Cahir—Mackay 1806 *521*.
9	Clare	Lisdoonvarna '99—P. B. O'Kelly!
14	Queen's	Between Cullenagh & Stradbally—Mackay 1806 *521*.
16	Galw. W.	Near Maam '95—M. & S. *545*.
17	Galw. NE.	Near Tuam '99—P.
20	Wicklow	Shillelagh '99—P. And in NE., not common.
21	Dublin	Curragha bog—*Cyb.* I. Three Rock Mtn.—*Ir. Fl.*
22	Meath	Near Navan '96—P.
24	Longfd.	Carn Clonhugh '98, Lough Forbes, Lough Gowna—P.
25	Roscomn.	Lough Arrow '97—P.
29	Leitrim	Ballinamore '00—Somerville.
30	Cavan	Drumhawnagh '99, Mount Nugent '96—P.
32	Monaghn.	Kilmore L., Bessmount, '00—Waddell. Dartrey.
33	Ferman.	Near Crum Castle '81–2—Barrington *108*.
34	Dongl. E.	Near Scalp (Hunter), Pettigoe, &c.: rare—*Fl. Don.*
35	Dongl. W.	Lough Gartan, &c.: local and rare—*Fl. Don.*
36	Tyrone	Strabane glen '96—Miss Knowles.
37	Armagh	Annagarriff Lake '92: rare, north only—P.
38	Down	Carngaver '95—P. Frequent—*Fl. NE.*
39	Antrim	Ballymena '99—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Kilrea '95—Mrs. Leebody. Rare—*Fl. NE.*

Rare, and chiefly in the north. A few old records are dubious, and for several others which are given above (7, 14, 21) recent confirmation is desirable.

Carex ovalis Good.

Divisions all. Frequent, usually avoiding the limestone, and frequenting the hills.

Carex Buxbaumii Wahl. (*C. fusca* All.)

39	Antrim	Harbour Island in Lough Neagh near Toome '86, Stewart: nearly extinct—*Fl. NE.*

A close search for this plant round the little explored western shores of Lough Neagh appears most desirable, in view of its probable approaching extinction in its old station.

Carex Hudsonii Ar. Benn. (*C. stricta* Good.)

Census 34—East 13, Centre 12, West 9.

1	Kerry S.	Killarney '00 : rare and local—Scully.
2	Kerry N.	Killarney '99 : local, and chiefly in the south—Scully.
4	Cork Mid	Ballyphehane bog (Carroll)—Allin *Fl.* '83.
6	Waterfd.	Clonea marsh '82—Hart *384*.
7	Tipp. S.	Farranaleen '98—P.
8	Limrck.	Curragh Chase '00—P.
10	Tipp. N.	Nenagh '99, Thurles, Friar's Lough—P.
11	Kilkny.	Lough Cullin '99, Urlingford, Johnstown—P.
12	Wexford	Morris Castle '81—Hart *371*.
13	Carlow	South of Carlow '98—P.
14	Queen's	Rathdowney '00—Phillips. Dunmore '98—P.
15	Galw. SE.	Marble Hill '97—P. Throughout, frequent.
16	Galw. W.	Derryclare L. '94—P. Frequent, especially in the east.
17	Galw. NE.	Castlegrove '99, Keekill, Donamon—P.
18	King's	Pallas Lough '00—P. Widespread, not common.
19	Kildare	Rathangan '98—P. Along the Barrow—Hart *383*.
20	Wicklow	About the lakes in Wicklow—*Guide* '78.
(21	Dublin	Royal Canal—*Guide* '78. Never found—Colgan.)
22	Meath	Beauparc '00, Lough Sheelin '96—P.
23	Westmth.	Lough Iron '99—P. Centre frequent, west common.
24	Longfd.	Lough Forbes '00, Woodlawn '98—P.
25	Roscomn.	Corkip Lough '99, Athlone, Lough Key—P.
26	Mayo E.	Near Clonbur '95—M. & S. *545*.
27	Mayo W.	Newport '99—Marshall.
28	Sligo	Lough Gill '99—P.
29	Leitrim	Glenade '99, and frequent in the south—P.
30	Cavan	Lough Oughter and Mount Nugent '96—P.
31	Louth	Braganstown bog '97—P.
32	Monaghn.	Glasslough and Rossmore '00—Waddell. Rare.
33	Ferman.	Belcoo, Garrison, '00—P. L. Erne c.—Barrington *108*.
34	Dongl. E.	By the River Erne—*Fl. Don.*
37	Armagh	Loughgall, Lough Neagh, Lough Gilly, '92—P.
39	Antrim	Portmore '92, and frequent in Bann basin—P.
40	L'derry	Lough Beg '98—Druce. Bann basin, rare—*Fl. NE.*

A characteristic plant of the lakes and rivers of the Central Plain, becoming rare in the north and south.

Carex acuta L.

Census 19—East 7, Centre 7, West 5.

2	Kerry N.	Killarney '90—Scully.
5	Cork E.	Youghal bog '00—Phillips.
8	Limrck.	Curragh Chase! '00—Miss Knowles.
10	Tipp. N.	Lough Derg below Portumna '98—P.
15	Galw. SE.	Portumna '00—Phillips. Not rare on the Shannon.
17	Galw. NE.	River Suck at Donamon '97—P.
18	King's	By the Shannon north of Banagher '98—P.
19	Kildare	Canal at Rathangan, D. Moore—*Cyb.* I.
22	Meath	Beauparc and Navan '96—P. Drogheda—*Cyb.* I.
23	Westmth.	Near Glynnwood House '99—P.
28	Sligo	Lough Key '97—P.
30	Cavan	Tomkin Road '00—Somerville. Killykeen '96—P.
32	Monaghn.	Dartrey '00—Somerville.
33	Ferman.	Enniskillen '83—Stewart.
34	Dongl. E.	Eske River, &c.: south only, rare—*Fl. Don.*
37	Armagh	Loughgall '77—Stewart. Lough Neagh—Lett!
38	Down	Gillhall '84—Stewart. Rare—*Fl. NE.*
39	Antrim	Portmore '92—P. Rare—*Fl. NE.*
40	L'derry	Toome, D. Moore—*Cyb.* I. Moneymore—*Fl. Ulst.*

Widely but locally distributed. Certain recorded stations are held over pending confirmation: some of them appear referable to *C. paludosa.*

Carex trinervis Degl.

16	Galw. W.	Near Roundstone '85—Linton *497*.

Carex rigida Good.

Census 15—East 5, Centre 2, West 8.

1	Kerry S.	Glanbehy '92: on most of the mountains—Scully.
2	Kerry N.	Mangerton '96: southern mountains frequent—Scully.
3	Cork W.	Adrigole Mountain '94—Phillips.
6	Waterfd.	Above Stilloge L. and Coumshingaun '82–3—Hart *381*.
7	Tipp. S.	Slievenaman '00—P. Galtees; Knockmealdowns.
12	Wexford	Blackstairs summit '99—P.
13	Carlow	Mount Leinster and Blackstairs '99–'00—P.
16	Galw. W.	Benwee '99—Colgan.

20 Wicklow Lugnaquilla—More '72 *614*.
27 Mayo W. Croaghaun '99—Colgan. Higher mountains frequent.
28 Sligo Ben Bulben and Truskmore '84—B. & V. *112*.
34 Dongl. E. Bulbein Mount—*Fl. Don.*
35 Dongl. W. Knockalla '98—Hart *405*. Local—*Fl. Don.*
36 Tyrone Mullaghclogha '83—Hart *381*. Sperrins, rare.
40 L'derry Dart '92—P. Sperrin mountains rare.

Chiefly on the mountains of the south and west.

Carex aquatilis Wahlb.

Census 11—East 2, Centre 4, West 5.

1 Kerry S. Glencar '99—Scully.
2 Kerry N. Near Upper Lake of Killarney '94—Scully.
16 Galw. W. By the Maam River '95—M. & S. *545*.
22 Meath River Blackwater near Daly's bridge '96—P.
23 Westmth. River Inny below Ballinalack '99—P.
25 Roscomn. South end of Lough Allen '84—Stewart *860*.
30 Cavan River Blackwater below L. Ramor abundant '96—P.
34 Dongl. E. Along R. Finn—*Fl. Don.* R. Eske, Hart—*Cyb.* II.
35 Dongl. W. Barra River, Finn River above Clady—*Fl. Don.*
36 Tyrone Finn River near Strabane '96—Miss Knowles.
39 Antrim Ballymena! '99—Miss Knowles. Shane's C. '91—P.

Chiefly in the north, and always at low levels.

Carex vulgaris Fr.

Divisions all. Common.

Carex glauca Scop.

Divisions all. Common.

Carex limosa L.

Census 23+(1)—East 6+(1), Centre 6, West 11.

1 Kerry S. Owenreagh River '99: rather frequent—Scully.
2 Kerry N. Gneevgullia '98—P. Rather rare—Scully.
3 Cork W. Near Schull '96—Phillips. Sugarloaf—Allin *Fl.*
4 Cork Mid Newmarket '70—Allin 7.
9 Clare Lisdoonvarna '99—P. B. O'Kelly! Rare.
15 Galw. SE. Marble Hill '98, Dalystown—P. Woodford—*Cyb.* I.
16 Galw. W. Recess '95—P. Widespread, frequent.

17 Galw. NE. Near Killower Lough '99—P.
18 King's Frankford '00, Lough Goura '98—P.
19 Kildare South of Thomastown '96—P.
(21 Dublin Curragha bog—Wade 1804 *902*.)
22 Meath Carbury, and between Athboy and Navan, '96—P.
23 Westmth. Loughanstown, &c.—Levinge '94 *484*. Very rare.
24 Longfd. Near Roosky '00—P.
26 Mayo E. Hollymount, More—*Cyb.* I.
27 Mayo W. Mallaranny '99—Marshall. Frequent.
28 Sligo Near Cliffony '00, Lough Gara '97—P.
33 Ferman. South of Belleek '00—P.
34 Dongl. E. Lough Unshin, &c.: rare—*Fl. Don.*
35 Dongl. W. Gamble's Lough '98—Hart *405*. Local—*Fl. Don.*
36 Tyrone Lough Ouske '92—P. *687*.
38 Down Saul camp '90—P. Very rare—*Fl. NE.*
39 Antrim Killagan '94—P. Very rare.
40 L'derry Lough Ouske '92—P. *687*.

Chiefly on wet bogs in the west.

Carex pilulifera L.

Divisions all. Generally on hilly ground, but has a number of stations in the Limestone Plain.

Carex præcox Jacq.

Divisions all, *except 36 Tyrone*. Frequent.

Carex pallescens L.

Census 28+(1)—East 8+(1), Centre 9, West 11.

1 Kerry S. Kenmare '00: rather frequent—Scully.
2 Kerry N. Killarney '99: chiefly in the south—Scully.
3 Cork W. Dunmanway, &c., '00: rare—Phillips.
4 Cork Mid Ballinhassig, St. Anne's Hill—Allin *Fl.* '83.
5 Cork E. Near Mitchelstown '97: rare—Phillips.
7 Tipp. S. Near Kilbeheny '97—Phillips.
9 Clare Lisdoonvarna '00—Miss Knowles. North half f.
11 Kilkny. Inistioge '98—P.
14 Queen's Camross '97—P. Tinnehinch '84—Hart *383*.
15 Galw. SE. Dalystown '97, Woodford, Chevy Chase—P.
16 Galw. W. Carn Seefin '95—P. Benbaunbeg—Hart *380*.
18 King's Cadamstown '00, Arderin '97—P.

20	Wicklow	Annamoe '84, Hart—*Cyb.* II. Glendalough—*Cyb.* I.
(21	Dublin	Kelly's Glen—Mackay '25 *522*; &c. ?—Colgan.)
24	Longfd.	Longford '98, Lough Forbes, Carn Clonhugh—P.
26	Mayo E.	Near Foxford, More—*Cyb.* I.
27	Mayo W.	Delphi, Mweelrea, Doo Lough, '82—Hart *380*.
28	Sligo	Ben Bulben '82—Corry *248*.
29	Leitrim	Carrick '99—P. Drumod (Dyer)—More *614*.
30	Cavan	Ballyconnell '00—Somerville. Shannon Pot—Stewart.
32	Monaghn.	Drumreaske, Rossmore, '00—Waddell. Bessmount.
33	Ferman.	Enniskillen '99—P. Frequent.
34	Dongl. E.	Castleforward, &c.: centre and south, rare—*Fl. Don.*
35	Dongl. W.	Gweebarra, &c.: throughout, rare—*Fl. Don.*
36	Tyrone	Omagh and Strabane '96—Miss Knowles.
37	Armagh	Armagh (Johnson!), Ardmore (Lett!)—P. '93 *701*.
38	Down	Tollymore Park '90—P. Rare—*Fl. NE.*
39	Antrim	Cullybackey '00—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Kilrea '93—Mrs. Leebody. Rare—*Fl. NE.*

Very rare in the east, except in the north-east.

Carex panicea L.

Divisions all. Common.

Carex pendula Huds.

Census 28—East 11, Centre 9, West 8.

1	Kerry S.	‡Valentia '92—Scully.
2	Kerry N.	‡Near Tralee '92: rather rare—Scully.
3	Cork W.	Glandore and Myross—Allin *Fl.* '83.
4	Cork Mid	Mountdesart '98: rare—Phillips.
5	Cork E.	Glanmire '99: rare—Phillips.
6	Waterfd.	Cappoquin and Stradbally '99—P.
7	Tipp. S.	Cahir '00—P. Carrick-on-Suir '00—Phillips.
8	Limrck.	Doon '00—P.
9	Clare	Lisdoonvarna '00—Miss Knowles. Inishcaltra.
10	Tipp. N.	River below Nenagh '99—P.
11	Kilkny.	Kilkenny '00—Phillips. Centre and SE., frequent.
12	Wexford	Courtown '97—P. Frequent in north, rare in south.
14	Queen's	Near Stradbally '97—P.
15	Galw. SE.	Chevy Chase '73—Hart *364*.
18	King's	Clonad wood '96—P.
20	Wicklow	River above Bray '94—P. North-east only, rare.

21	Dublin	Near Drimnagh '00: rare—Colgan.
26	Mayo E.	†Ashford '96—Marshall *537*.
28	Sligo	Hazelwood '96—Colgan.
29	Leitrim	Above Glencar Lake '96—Colgan.
30	Cavan	Near Swanlinbar—Mackay 1806 *521*.
31	Louth	Bellingham Castle demesne c. '00—W. de V. Kane.
33	Ferman.	Florencecourt '00—P. Marble Arch—Stewart *854*.
35	Dongl. W.	Eske River and Eanymore Water—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles. Favour Royal—Hart *392*.
37	Armagh	Tanderagee demesne '92—P.
38	Down	Montalto, Stewart—*Fl. NE.*
39	Antrim	Glenariff '93—Shoolbred *837*. Rare—*Fl. NE.*

It is difficult to distinguish native stations from others in which the plant may have been introduced for ornamental purposes, as its favourite habitats—woods and wooded river-banks—are generally to be found in large demesnes.

Carex strigosa Huds.

Census 15+(1)—East 7+(1), Centre 4, West 4.

2	Kerry N.	Near Listowel '90: very rare—Scully.
(4	Cork Mid	Dunscombe's wood—Power *Fl.* '45. Not seen since.)
5	Cork E.	Doneraile (C. Longfield)—Allin *Fl.* '83.
7	Tipp. S.	Knocklofty '82—Hart *385*.
12	Wexford	North of Courtown plentiful '97—Marshall *539*.
14	Queen's	Dunmore woods, Mackay 1806—*Cyb.* I.
20	Wicklow	Dargle—Wade 1804 *902*.
21	Dublin	Near Drimnagh '00: rare—Colgan.
28	Sligo	West end of Glencar Lake '84—B. & V. *112*.
33	Ferman.	Florencecourt '00—P.
34	Dongl. E.	By the Erne below Cliff—*Fl. Don.*
35	Dongl. W.	Mount Charles—*Fl. Don.* Donegal, Dickie—*Fl. Ulst.*
36	Tyrone	Favour Royal '87—Hart *392*.
37	Armagh	Ardmore (Lett!)—P. '92 *701*.
38	Down	Belvoir Park '70—B.N.F.C. *117*. Crawfordsburn.
39	Antrim	Muckamore '93—P. Frequent—*Fl. NE.*

Carex sylvatica Huds.

Divisions all *except 19 Kildare*. Frequent, and no doubt universal.

Carex lævigata Smith.

Census 33—East 12, Centre 10, West 11.

1	Kerry S.	Cloonee '98—P. Frequent—Scully.
2	Kerry N.	Killarney '99: rather frequent—Scully.
3	Cork W.	Castletownsend '97: rare—Phillips.
4	Cork Mid	Mountdesart '96: frequent—Phillips.
5	Cork E.	Glanmire '00: frequent—Phillips.
6	Waterfd.	Dungarvan, Clonea, '99—P. Gurteen—*Cyb.* I.
7	Tipp. S.	Fethard '97—P.
8	Limrck.	Foynes '99—Somerville.
9	Clare	Lisdoonvarna '00—Miss Knowles.
11	Kilkny.	Near Borris '84—Hart *383*.
12	Wexford	North-east base of Mount Leinster—Hart.
13	Carlow	Ballintemple, Aghade, '99—P. Newtownbarry—*614*.
14	Queen's	Ballybrophy '98—P.
15	Galw. SE.	Dalystown, Marble Hill, '98—P. Chevy Chase—*364*.
16	Galw. W.	Near Clonbur '95—M. & S. *545*.
18	King's	Kinnitty '00, Clonad wood '96—P.
20	Wicklow	Devil's Glen '00—C. Waterfall. Frequent.
21	Dublin	Kilmashogue '94—Colgan.
24	Longfd.	Woodlawn and Cloonee '98—P.
26	Mayo E.	Near Foxford, Móre—*Cyb.* I.
27	Mayo W.	Newport '99—Marshall. L. Cullin, More—*Cyb.* I.
28	Sligo	Ballysadare '99—P. Ben Bulben '84—B. & V. *112*.
29	Leitrim	Lurganboy '99—P. Kinlough '84—B. & V. *112*.
30	Cavan	Ballyconnell '00—Somerville. Slieve Glah—P.
32	Monaghn.	Dartrey '00—Somerville. Castleblayney '96—P.
33	Ferman.	Crum Castle '81-2—Barrington *108*.
34	Dongl. E.	Bridge End (Hunter)—Hart '99 *405*. R. Erne—*Fl. Don.*
35	Dongl. W.	Killybegs '96—P. Fanet and Lough Eske—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles. Favour Royal—Hart *392*.
37	Armagh	Clare '92—P. Armagh '80—W. F. Johnson!
38	Down	Kilmore '93—Waddell! Rare—*Fl. NE.*
39	Antrim	Cullybackey '99—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Limavady '95—B.N.F.C. *130*. Rare.

Carex binervis Smith.

Divisions all. Strongly calcifuge, and consequently local and sometimes rare in those divisions where limestone predominates.

Carex distans L.

Maritime and sub-maritime divisions all *except 36 Tyrone, 37 Armagh*: namely, 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16, 17, 20, 21, 22, 27, 28, 29, 31, 34, 35, 38, 39, 40. Very rare inland, as follows:—

17 Galw. NE. Barbersfort, and by Clare River north of Tuam '99—P.
33 Ferman. Cleenishgarve on Lower Lough Erne '92—P. *691*.

Carex punctata Gaud.

1 Kerry S. Kenmare '99: rather frequent but local—Scully.
2 Kerry N. Kerry Head '88—Scully.
3 Cork W. Schull '96: south only, rare—Phillips.
4 Cork Mid Kinsale '91—Phillips. Oysterhaven; Kilgobbin.
5 Cork E. Between Power Head and Ballycotton '98—Phillips *670*.

Carex Hornschuchiana Hoppe.

Census 35—East 12, Centre 11, West 12.

Divisions all *except 8 Limerick, 12 Wexford, 22 Meath, 31 Louth, 36 Tyrone*. Frequent, but local in many divisions. No doubt occurs in all.

Carex extensa Good.

Census 23—East 12, Centre 1, West 10.

1 Kerry S. Kenmare '99: frequent—Scully.
2 Kerry N. Near Ballybunnion '94: frequent—Scully.
3 Cork W. Timoleague '97: frequent—Phillips.
4 Cork Mid Belgooly '00 (Scully): frequent—Phillips.
5 Cork E. Little Island '00: common—Phillips.
6 Waterfd. Clonea '99—P. Common.
8 Limrck. Foynes '85–6—Stewart *863*.
9 Clare Inishmore '90—Nowers and Wells *651*.
11 Kilkny. Ballinlaw and Snowhill '99—P. Estuaries frequent.
12 Wexford Macmine '97—Marshall. Frequent in the south.
15 Galw. SE. Kilcolgan estuary '99—P.
16 Galw. W. L. Corrib below Oughterard '99—P. Coast frequent.
17 Galw. NE. Rinmore '00—Phillips.
20 Wicklow Wicklow '97—P. Frequent.
21 Dublin Portrane '00: local—Colgan.
22 Meath Laytown and Mornington '96—P.
27 Mayo W. Mallaranny '99—Marshall. Frequent.

31	Louth	Greenore '00, Clogher Head, Queensborough—P.
34	Dongl. E.	Malin Head '98—Hart *405*. N. r., S. f.—*Fl. Don.*
35	Dongl. W.	Roross '98—Hart *405*. Local—*Fl. Don.*
38	Down	Comber River '00—P. Frequent—*Fl. NE.*
39	Antrim	Cushendall, Larne L., Belfast L., D. Moore—*Cyb.* I.
40	L'derry	Bellarena '97—Mrs. Leebody. Frequent—*Fl. NE.*

Rather local round the coast. The Lough Corrib station is the only inland habitat in the British Isles.

Carex flava L.

Divisions all. Common.

Carex filiformis L.

Census 22+(2)—East 4+(2), Centre 8, West 10.

1	Kerry S.	Killarney '96—Scully.
2	Kerry N.	Killarney '99—Scully. Lixnaw—Scully *827*.
3	Cork W.	Inchigeela '00—Phillips. Glengariff; Sheep's Head.
(4	Cork Mid	Ballyphehane—Drummond '20 *287*. Not there now.)
9	Clare	Monmor bog, D. Moore—*Cyb.* I.
10	Tipp. N.	Below Portumna '97—P.
13	Carlow	Milford '98—P.
14	Queen's	Near Maryborough '96—P.
15	Galw. SE.	Marble Hill '97—P. Throughout, local.
16	Galw. W.	Glen Inagh '98—Colgan. Throughout, frequent.
17	Galw. NE.	Castlegrove, and common on Lough Corrib, '99—P.
18	King's	Lough Goura '98—P.
19	Kildare	East of Rathangan '98—P.
22	Meath	Between Navan and Drogheda, D. Moore—*Cyb.* I.
23	Westmth.	Scraw bog '92—Levinge! Lough Ree frequent—P.
24	Longfd.	Derrymacar L., Saint's I. '00—P. Rathcline—*113*.
25	Roscomn.	Rockville '99, Corkip Lough, Athlone, L. Key—P.
26	Mayo E.	Near Cong '95—M. & S. *545*. Hollymount—*Cyb.* I.
27	Mayo W.	Birreencorragh, Crampaun R., Erriff R., '82—Hart *380*.
33	Ferman.	West of Ballyshannon '83–4—Hart *386*.
34	Dongl. E.	L. Napaste, &c.: centre and south, very local—*Fl. Don.*
35	Dongl. W.	Gamble's Lough '98—Hart *405*. Very local—*Fl. Don.*
38	Down	Lake near Strangford '97—P. *765*.
(39	Antrim	Selchin on L. Neagh, D. Moore: extinct—S. & P. *874*.)

Increases westward.

Carex hirta L.

Divisions all. Frequent.

Carex Pseudo-cyperus L.

Census 22—East 8, Centre 9, West 5.

4	Cork Mid	Ballincollig '98 : rare—Phillips.
5	Cork E.	Youghal '96 : rare—Phillips.
7	Tipp. S.	By G. S. W. railway north of Dundrum '00—P.
8	Limrck.	Curragh Chase '00—P. Plassy, Carroll—*Cyb.* I.
9	Clare	Inishcaltra '99—W. Fogerty! Frequent in south.
10	Tipp. N.	Portumna '00—Phillips. F. near the Shannon.
13	Carlow	Borris demesne '99—P.
14	Queen's	Mountmellick '96—P. Dunmore—Mackay *521*.
15	Galw. SE.	Rinmaher on L. Derg '96—Colgan. Portumna—P.
16	Galw. W.	Between Galway and Moycullen '95—M. & S. *545*.
17	Galw. NE.	Menlo Castle '99—P.
18	King's	Shannon Harbour '98—P.
20	Wicklow	Newcastle—More '72 *614*. Old Dargle—Wade *902*.
21	Dublin	Brackenstown and Curragha—Wade 1804 *902*.
22	Meath	Near Enfield '96—P.
23	Westmth.	Twy Lough '98—P.
24	Longfd.	Lough Forbes '00—P.
25	Roscomn.	Near Ballybay '98—P.
29	Leitrim	Rinn Lough '99—P.
30	Cavan	Lough Oughter, Farnham, '96—P. Belturbet—*Cyb.* I.
37	Armagh	Tartaraghan '92—P. Near Lurgan (Robinson)—P. *701*.
39	Antrim	Bog meadows '86—P.

Carex paludosa Good.

Census 26—East 13, Centre 9, West 4.

3	Cork W.	Macroom '97—Phillips. Dunmanway—Allin *Fl.*
5	Cork E.	Dunsfort bog—Allin '71 *8*.
6	Waterfd.	Clonea marsh '99—P.
7	Tipp. S.	Ardmayle '98—P. Whole course of River Suir, f.
8	Limrck.	Curragh Chase '99—Somerville. Dromkeen '00—P.
9	Clare	River Fergus near Ennis '79—Corry *240*.
10	Tipp. N.	Nenagh '99, Dromineer—P. Frequent along Suir.
11	Kilkny.	Thomastown '98, Kilkenny, Ballyragget—P.
12	Wexford	Ballymadder and near Enniscorthy, Hart—*Cyb.* II.

13	Carlow	Goresbridge '99: Barrow and Slaney frequent—P.
14	Queen's	Rathdowney '00—Phillips. Common.
15	Galw. SE.	Loughrea '98—P. Frequent throughout.
18	King's	Tullamore '99, Edenderry '96—P. Rare.
19	Kildare	Kilkea Castle '99: frequent throughout—P.
20	Wicklow	Blessington '98—P. Murrough—More *614*.
21	Dublin	Near Drimnagh '00: local—Colgan.
22	Meath	Navan '00: widespread, not common—P.
23	Westmth.	Glynnwood House '99—P. Centre frequent.
24	Longfd.	Longford '98: frequent in west half—P.
25	Roscomn.	Lough Key '97—P.
29	Leitrim	Glencar '96—Colgan.
30	Cavan	Farnham and Mount Nugent '96—P.
31	Louth	Braganstown bog '97—P.
37	Armagh	L. Neagh '00—Davies. Loughgall, Tynan Abbey—P.
38	Down	Lough Neagh shore frequent '00—Davies.
40	L'derry	River Bann below Coleraine (D. Moore)—S. & P. *874*.

A characteristic plant of the swamps and rivers of the Central Plain, thinning out in the north and south.

Carex riparia Curtis.

Census 28—East 14, Centre 6, West 8.

2	Kerry N.	Abbeydorney '99: rather rare—Scully.
3	Cork W.	Kilkerrin L. '96, Scully—*Cyb.* II. V. r.—Allin *Fl.*
4	Cork Mid	Ballyphehane, &c.—Power *Fl.* '45. Rare—Phillips.
5	Cork E.	Youghal '96—Phillips. Shanagarry bog—*Cyb.* I.
6	Waterfd.	Bunmahon '99—P. Frequent.
7	Tipp. S.	Thurles '00—Phillips. Carrick-on-Suir '00—P.
8	Limrck.	Limerick '00—P. Rinekirk—Stewart *863*.
9	Clare	Ennis and Ballycar '85–6—Stewart *863*.
10	Tipp. N.	Toomavara '00—P. Templemore; Portumna.
11	Kilkny.	Ballyragget '99—P. Common by rivers in S. and E.
12	Wexford	Macmine '97—Marshall. Slaney and E. coast, rare.
13	Carlow	Milford '84—Hart.
14	Queen's	Maryborough '93—P.
15	Galw. SE.	Loughrea '98—P.
17	Galw. NE.	Lough Corrib near Keekill '99—P. Headford—*Cyb.* I.
19	Kildare	Ballitore, Carroll—*Cyb.* I.
20	Wicklow	Killoughter '97, Kilcoole—P. Powerscourt—Hart *406*.
21	Dublin	Donabate '00: local—Colgan.

22	Meath	Coonen Hill '95 : frequent in the extreme east—P.
24	Longfd.	Near Ballymahon '85–6—B. & V. *113*.
27	Mayo W.	Killala '00—P.
31	Louth	Dundalk '96, and frequent further south—P.
34	Dongl. E.	S. of Donegal and W. of Ballyshannon—*Fl. Don.*
35	Dongl. W.	St. John's Point—*Fl. Don.*
36	Tyrone	River Finn, Admiral Jones—*Cyb.* I.
38	Down	Killough '00—P. Rare—*Fl. NE.*
39	Antrim	Portmore '91—P. Rare—*Fl. NE.*
40	L'derry	River Bann below Coleraine '94—P.

Carex ampullacea Good.

Divisions all. Abundant.

Carex vesicaria L.

Census 37—East 13, Centre 13, West 11.

1	Kerry S.	Glencar '92 : rare—Scully.
2	Kerry N.	Killarney '94 : chiefly in the south—Scully.
4	Cork Mid	Near Buttevant '00 : rare—Phillips.
5	Cork E.	Midleton '00 : rare—Phillips.
6	Waterfd.	Clonmel '97—P. Frequent on the Blackwater.
7	Tipp. S.	Thurles '00—Phillips. Frequent in the north.
8	Limrck.	Limerick '99—Somerville. Rinekirk—Stewart *863*.
9	Clare	Castletown and Carran, P. B. O'Kelly—*Cyb.* II.
10	Tipp. N.	Roscrea '00—Phillips. Templemore; Portumna.
11	Kilkny.	River Nore at Ballyragget '99—P.
12	Wexford	Macmine '97—Marshall. Enniscorthy—Hart *371*.
13	Carlow	River Barrow at Milford '98—P.
14	Queen's	Near Abbeyleix '84—Hart *388*. Rather frequent.
15	Galw. SE.	Portumna '00—Phillips. Lough Cooter '00—P.
16	Galw. W.	South of Lough Mask '95—M. & S. *545*.
17	Galw. NE.	Near Clonbrock '96—P.
18	King's	Tullamore '99, Banagher—P. Portarlington—*383*.
19	Kildare	Levitstown '99—P. Moore Abbey '84—Hart *383*.
20	Wicklow	Between Wicklow and Arklow, L. Dan, Hart—*Cyb.* II.
23	Westmth.	Coosan Lough and Athlone '98—P.
24	Longfd.	Lough Gowna and Lough Forbes '00—P.
25	Roscomn.	Athlone '98, and frequent along River Suck—P.
26	Mayo E.	Kilmovee, &c. '99—P. Widespread.
27	Mayo W.	SW. shore of L. Conn '00—P. Foxford, More—*Cyb.* I.

28	Sligo	Lough Gill '84—B. & V. *112*.
29	Leitrim	L. Gill, Rinn L. '99—P. L. Allen—Stewart *859*.
30	Cavan	Farnham, Lough Oughter, '96—P. L. Erne—*Cyb.* I.
31	Louth	Near Castlebellingham, Butler—*Cyb.* II.
32	Monaghn.	Rockcorry '00—P. Glasslough—*Cyb.* I.
33	Ferman.	Devenish, &c. on Lough Erne—Barrington *108*.
34	Dongl. E.	Brown Hall, and along the Erne—*Fl. Don.*
35	Dongl. W.	Lennan River—*Fl. Don.*
36	Tyrone	Dungannon '96—Mrs. Leebody. Strabane ; Fymore L.
37	Armagh	Frequent throughout '92—P.
38	Down	Kilmore '99—Waddell. Frequent—*Fl. NE.*
39	Antrim	Cullybackey '00—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Lough Beg '98—Druce. Frequent—*Fl. NE.*

Phalaris arundinacea L. Reed-grass.

Divisions all. Common.

Anthoxanthum odoratum L. Vernal Grass.

Divisions all. Common.

Alopecurus geniculatus L.

Divisions all, *except 13 Carlow*. Frequent.

Alopecurus pratensis L. Fox-tail.

Divisions all, *except 33 Fermanagh*. By no means common ; from a number of the divisions, only one station is noted.

Milium effusum L. Millet-grass.

Census 21—East 10, Centre 3, West 8.

1	Kerry S.	Waterville '00 : rather frequent—Scully.
2	Kerry N.	Listowel '99 : south frequent, north rare—Scully.
3	Cork W.	Castlefreke '91—Phillips.
4	Cork Mid	Dunderrow—Allin '74 *17*. Mountdesart—Power *Fl.*
5	Cork E.	Glanmire '99—Phillips. Castle Hyde—Drummond *287*.
6	Waterfd.	Lismore '99—P.
11	Kilkny.	Inistioge '00—Phillips. Along Nore and Barrow f.
13	Carlow	Aghade '99 : along Slaney and Barrow frequent—P.
15	Galw. SE.	Dalystown '98—P.
16	Galw. W.	North-west of Oughterard '99—P.
20	Wicklow	Avondale '99—P. Frequent in the north-east.
23	Westmth.	Knock Ross—Levinge '94 *484*.

26 Mayo E. South of Claremorris '00—P.
27 Mayo W. Lough Cullin and Lough Conn, More—*Cyb.* I.
28 Sligo Near Sligo, J. Wynne—*Cyb.* I.
35 Dongl. W. Lough Eske and Eanymore Water—*Fl. Don.*
36 Tyrone Strabane '96—Miss Knowles. Rare.
37 Armagh Killooney, Johnson! near Newry, Lett!—P. '92 *701.*
38 Down Rostrevor '97—P. Rare—*Fl. NE.*
39 Antrim Colin Glen—*Hb.* D. Moore! Extinct elsewhere.
40 L'derry Near Eglinton '98—Mrs. Leebody.

Generally occurs where rocky woods or deep wooded glens are to be found, and is distributed accordingly.

Phleum pratense L. Timothy-grass.

Census 33—East 12, Centre 12, West 9.

Divisions all *except 6 Waterford, 11 Kilkenny, 14 Queen's Co., 16-17 Galway W. and NE., 19 Kildare, 28 Sligo.* One station only in 15, 22, 24, 26, 35, 36. Common in 5, 23, 29, 33, 37, 38, 39, 40. A local plant.

Phleum arenarium L.

Census 17—East 10, Centre 0, West 7.

1 Kerry S. Castlegregory '94: rare but locally abundant—Scully.
2 Kerry N. Banna '94: rare, locally abundant—Scully.
5 Cork E. Youghal '00—Phillips. Ballycotton—Power *Fl.*
6 Waterfd. Tramore '99—Phillips.
9 Clare Inishmore '95—P.
12 Wexford Carnsore '97—Marshall. Frequent.
20 Wicklow Arklow '95—P. Murrough, D. Moore—*Cyb.* I.
21 Dublin North Bull '00: common—Colgan.
22 Meath Boyne mouth '96—P. Gormanstown—More *614.*
27 Mayo W. Mallaranny '99—Marshall.
28 Sligo Rosses Point! '00—West. Strandhill '97—P. Cliffony.
31 Louth Baltray '96—P.
34 Dongl. E. Buncrana, Bundoran, &c.: N. and S., local—*Fl. Don.*
35 Dongl. W. Dunfanaghy, &c.: local—*Fl. Don.*
38 Down Tyrella '00—P. Round Dundrum Bay only.
39 Antrim Portrush '98 (L. Watt)—A. Bennett.
40 L'derry Bellarena '97—Mrs. Leebody. Frequent.

Local on sandy coasts; commoner on the eastern seaboard than on the western.

Agrostis canina L. Bent (genus).

Divisions all, *except 14 Queen's Co., 15 and 17 Galway SE. and NE., 19 Kildare, 24 Longford, 25 Roscommon.* No doubt universal.

Agrostis alba L. Fiorin.

Divisions all, *except 14 Queen's Co., 24 Longford, 25 Roscommon.* No doubt universal.

Agrostis vulgaris With.

Divisions all. Abundant.

Calamagrostis Epigeios Roth.

9	Clare	Ballyvaughan '99—P. B. O'Kelly! Inishmore f.'95—P.
16	Galw. W.	Inishbofin '75—More *616.*
40	L'derry	Formoyle Hill '95—Miss Knowles & P. Between Maghera and Garvagh—*Cyb.* I.

Calamagrostis stricta Nutt. var. **Hookeri** Syme.

36	Tyrone	Scawdy I. '92—P. Washing Bay, Robinson—*Fl. NE.*
37	Armagh	Lough Neagh at Lagan Canal '92—P.
39	Antrim	Shane's Castle '86—P. N. shores of L. Neagh, rare.
40	L'derry	Lough Beg near Church Island '66—Stewart.

Around Lough Neagh and the adjoining Lough Beg only, extinct in some of its former stations.

Psamma arenaria R. & S. Marram; Bent.

Maritime divisions all, *except 4 Cork Mid, 15 and 17 Galway SE. and NE., 29 Leitrim*: namely, 1, 2, 3, 5, 6, 8, 9, 12, 16, 20, 21, 22, 27, 28, 31, 34, 35, 38, 39, 40. Generally common on sandy shores.

Aira caryophyllea L. Hair-grass (genus).

Divisions all. Frequent.

Aira præcox L.

Divisions all. Frequent.

Deschampsia cæspitosa Beauv. (*Aira cæspitosa* L.)

Divisions all. Common.

Deschampsia alpina R. & S.

1 Kerry S. Brandon '85—Linton *502*. Reeks frequent—Hart *373*.
2 Kerry N. Horse's Glen on Mangerton '83—Ridley *812*.
27 Mayo W. Mweelrea and Ben Gorm '82—Hart *380*.

The editors of *Cybele*, ed. II., suspect that some of the foregoing records are referable to *D. cæspitosa* var. *pseudo-alpina*. I have not seen specimens.

Deschampsia flexuosa Trin.

Divisions all, *except 4 Cork Mid, 17 Galway NE.* Conspicuously calcifuge, and preferring mountainous situations. Usually abundant wherever suitable conditions occur; necessarily rare and local in the Central Plain.

Deschampsia discolor R. & S.

16 Galw. W. Craigga More Lough '97—P. Clifden to Kilkieran frequent—More *614*.

Holcus mollis L. Soft-grass (genus).

Divisions all. Frequent.

Holcus lanatus L.

Divisions all. Common.

Trisetum flavescens Beauv.

Census 38—East 15, Centre 13, West 10.

Divisions all, *except 16 Galway West, 35 Donegal West.* Calcicole. Usually abundant on the limestone, rare and local off it. One station only in 24, 26, 29, 32, 33, 36, and generally scarce in the north-west.

Avena pubescens Huds. Oat (genus).

Census 36—East 14, Centre 11, West 11.

Divisions all, *except 27 Mayo W., 30 Cavan, 31 Louth, 32 Monaghan.* Calcicole: generally frequent on the limestone, rare and local off it. One station only in 6, 11, 12, 13, 26, 34, 35, 36, 37. Commoner in 7, 23, and 25 than elsewhere.

Arrhenatherum avenaceum Beauv. Oat-grass.

Divisions all. Common.

Triodia decumbens Beauv. Heath-grass.

Divisions all. Frequent.

Phragmites communis Trin. Reed.

Divisions all. Common.

Sesleria cærulea Arduin. Moor-grass.

Census 13—East 0, Centre 4, West 9.

9	Clare	Black Head '99—Miss Knowles. Burren and Aran c.
10	Tipp. N.	Dromineer '99—P. Common on Lough Derg.
15	Galw. SE.	Moyode '99—P. Lough Derg and west half common.
16	Galw. W.	Roundstone '96: abundant along east margin—P.
17	Galw. NE.	Knockmae '00: common in W. and SW.—P.
23	Westmth.	By the Shannon at Athlone, Vowell—*Cyb.* II.
26	Mayo E.	S. of L. Mask '95—M. & S. *545*. L. Carra—More *600*.
27	Mayo W.	Killala '00—P. Ballina, D. Moore—*Cyb.* I.
28	Sligo	Ballysadare '00, Knocknarea—P. Ben Bulben—*502*.
29	Leitrim	Lough Gill and common in Glenade '99—P.
33	Ferman.	Florencecourt '00—P. Locally abundant S. of L. Erne.
34	Dongl. E.	Brown Hall '00—P. Pettigoe to Bundoran—*Fl. Don.*
35	Dongl. W.	L. Eske, &c.: extreme south only—*Fl. Don.*

Widely spread over the western limestone tracts, often occurring in great abundance. On sand-dunes at Roundstone.

Cynosurus cristatus L. Dog's-tail grass.

Divisions all. Common.

Kœleria cristata Pers.

Census 28—East 8, Centre 9, West 11.

1	Kerry S.	Sneem '00: local—Scully.
2	Kerry N.	Ballybunnion '99: frequent near the sea—Scully.
5	Cork E.	Corkbeg '97: rare—Phillips.
7	Tipp. S.	Fethard '00—Phillips. Knocklofty '00—P.
8	Limrck.	Lough Gur '00—P. Frequent in the north.
9	Clare	Lehinch '00—Miss Knowles. Frequent in the north.
10	Tipp. N.	Dromineer '99, Portumna '97—P.
15	Galw. SE.	Near Woodford '98, and on the coast, rare—P.
16	Galw. W.	Lough Ross '99—P. Inishbofin; E. margin frequent.
17	Galw. NE.	Knockmae '00: common in west half—P.

18	King's	Clonmacnoise '99—P.
20	Wicklow	Wicklow '97—P.
21	Dublin	Howth '00: local—Colgan.
22	Meath	Laytown '96—P.
23	Westmth.	Killinure Lough '98—P.
24	Longfd.	Priest's Island in Lough Ree '99—P.
25	Roscomn.	Corkip Lough '99: frequent in south half—P.
26	Mayo E.	Claremorris, Callow, '00—P. South of L. Mask—*545*.
27	Mayo W.	Mallaranny '99—Marshall. Frequent.
28	Sligo	Ballysadare '00—P. Frequent.
29	Leitrim	Glencar '75—Stewart.
31	Louth	Dromiskin and Clogher Head '96—P.
33	Ferman.	Derrygonelly '99, Marble Arch '00—West.
34	Dongl. E.	Brown Hall '00—P. North, rare—*Fl. Don.*
35	Dongl. W	Kincashla, &c.: throughout, local—*Fl. Don.*
38	Down	Ballyhalbert '97—P. Rare—*Fl. NE.*
39	Antrim	Portrush '99—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Castlerock '85—P. Frequent—*Fl. NE.*

Molinia cærulea Mœnch.

Divisions all. Locally abundant.

Catabrosa aquatica Beauv.

Divisions all, *except 8 Limerick, 16 Galway W.* Frequent in most of the divisions: one station only for 9, 10, 12, 31, 32.

Melica uniflora Retz.

Census 35—East 14, Centre 11, West 10.

Divisions all, *except 9 Clare, 10 Tipperary N., 19 Kildare, 25 Roscommon, 27 Mayo W.* Nowhere abundant; one station only in 6, 7, 17, 22, 31, 32, 36.

Dactylis glomerata L. Cock's-foot grass.

Divisions all. Common.

Briza media L. Quaking-grass.

Divisions all, but varies considerably in abundance.

Poa annua L. Meadow-grass (genus).

Divisions all. Common.

Poa alpina L.

1 Kerry S. Brandon '85, Colgan—*Cyb.* II.
28 Sligo Ben Bulben and Annacoona '85–6—B. & V. *112*.

Poa nemoralis L.

Census 16—East 10, Centre 2, West 4.

2 Kerry N. ‡Glenflesk Castle '97—Scully.
3 Cork W. Castle Bernard '97—Phillips.
5 Cork E. Ballyvodock wood '00—Phillips.
9 Clare Ballyvalley near Killaloe '96—Colgan.
13 Carlow Near Graiguenamanagh '00—Phillips.
19 Kildare Near Castletown '00—P. Frequent along east margin.
20 Wicklow Poulaphuca '00—P. Dargle—Mackay *522*.
21 Dublin Woodlands '00: rare—Colgan.
22 Meath Near Navan '97, Scully—*Cyb.* II.
23 Westmth. Knock Drin—Levinge '94 *484*.
34 Dongl. E. Inch (J. Hunter)—Hart '99 *405*.
36 Tyrone Cookstown '97—Miss Knowles.
37 Armagh Beechpark near Lurgan '97—Waddell.
38 Down Myra Castle '00—P. Locally frequent.
39 Antrim Ballymena '00—Miss Knowles. Chiefly in centre, rare.
40 L'derry About Limavady, D. Moore—*Cyb.* II.

A very local plant, occurring chiefly in the east.

†Poa compressa L.

Census 9+(1)—East 6+(1), Centre 0, West 3.

(4 Cork Mid Friar's Walk—Power *Fl.* '45. ? Error—Phillips).
12 Wexford †Enniscorthy '98—P. †Aughnagoppal bridge—*552*.
17 Galw. NE. Between Galway and Tuam—White 1808 *914*.
21 Dublin Foot of the Dublin Mountains, White—*Cyb.* I.
27 Mayo W. ‡Railway at Ballina '00—P.
31 Louth Tighmhuillin and Tullyallen—White 1808 *914*.
34 Dongl. E. North outskirts of Derry '00—Mrs. Leebody! Derry walls '88—Stewart.
37 Armagh Half mile NE. of Portadown (McMillan)—More '72 *614*.
38 Down Hillsborough '99—Davies *270*.
39 Antrim Doagh '00 (R. Hanna)—Stewart *870*. Rare.

A plant of uncertain standing, and requiring further observation.

Poa pratensis L.

Divisions all. Common.

Poa palustris L.

22 Meath Boyne from Beauparc to Navan frequent '00—P.

The only other British station is by the Tay below Perth.

Poa trivialis L.

Divisions all. Common.

Glyceria fluitans R. Br.

Divisions all. Common.

Glyceria plicata Fr.

Census 21—East 8, Centre 6, West 7.

1	Kerry S.	Rossbehy '00 : seems frequent—Scully.
2	Kerry N.	Killarney '00 : seems frequent—Scully.
3	Cork W.	Inchigeela '00, Skibbereen '97—Phillips.
4	Cork Mid	Coachford '97 : frequent—Phillips.
5	Cork E.	Dodge's glen '98 : probably frequent—Phillips.
11	Kilkny.	Kilkenny '00—Phillips.
14	Queen's	Camross '97, Maryborough '96—P.
15	Galw. SE.	Castle Taylor—More '55 *598*.
16	Galw. W.	Inishbofin '75—More *616*. Craigga More L.—*92*.
19	Kildare	Nurney '97, Carbury, Leixlip—P.
21	Dublin	Near Glasnevin and Dublin, More—*Cyb.* I.
22	Meath	Slieve Bregh '00, Boyne mouth, Oldcastle, Bective—P.
23	Westmth.	Knock Drin '95—Levinge *486*.
26	Mayo E.	Near Hollymount, More—*Cyb.* I.
27	Mayo W.	Newport '99—Marshall. Ballina '00—P.
28	Sligo	Rosses Point '97—P. Ben Bullen—B. & V. *112*.
30	Cavan	Lough Ramor '96—P.
31	Louth	Soldier's Point '96—P.
33	Ferman.	Castle Hume '81-2—Barrington *108*.
36	Tyrone	Omagh '96—Miss Knowles.
40	L'derry	Formoyle Hill '95—P.

Apparently common in Ireland.

Glyceria aquatica Smith.

Census 17—East 10, Centre 6, West 1.

4	Cork Mid	Near George IV. bridge at Cork '98—Phillips.
6	Waterfd.	Clonea marsh '99—P.
10	Tipp. N.	Portumna '97—P.
11	Kilkny.	Graiguenamanagh '00—Phillips. Barrow and Nore f.
12	Wexford	New Ross '89—B. & G. *101*. East, and c. on Barrow.
13	Carlow	Leighlinbridge '99: common along the Barrow—P.
14	Queen's	Grattan aqueduct '97: Barrow and canals frequent—P.
15	Galw. SE.	Portumna '98—P.
18	King's	Tullamore '99: Barrow and Grand Canal frequent—P.
19	Kildare	Nurney '97—P. Barrow and canals f., elsewhere r.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.
21	Dublin	Clondalkin '00: locally abundant—Colgan.
22	Meath	Ballivor '00: whole course of Boyne frequent—P.
23	Westmth.	Mullingar '97—Carr. Athlone, Royal Canal f.—P.
24	Longfd.	Near Killashee '00, and frequent in Royal Canal—P.
25	Roscomn.	West of Athlone '96—P. About L. Ree not common.
38	Down	Downpatrick '97—P.

Chiefly in the southern half of the Central Plain, where it has spread widely from the rivers along the canals. Absent from the west, and with only one station in Ulster.

Glyceria maritima M. & K.

Maritime and sub-maritime divisions nearly all, namely: 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 17, 20, 21, 22, 27, 31, 34, 35, 37, 38, 39, 40; *not yet recorded for 16, 28, 29, 36.*

Glyceria distans Wahlenb.

Census 11—East 7, Centre 0, West 4.

3	Cork W.	Not rare—Allin *Fl.* '83.
4	Cork Mid	Crosshaven '00: frequent near the sea—Phillips.
5	Cork E.	Aghada, &c. '00: frequent near the coast—Phillips.
12	Wexford	Wexford Harbour '96—Marshall *537*. Not rare.
20	Wicklow	Wicklow '97—P.
21	Dublin	Near Rush '00: local on the coast—Colgan.
34	Dongl. E.	Foyle River and Lough Swilly—*Fl. Don.*
35	Dongl. W.	Swilly River—*Fl. Don.*
37	Armagh	Narrow-water '92—P.
38	Down	Warrenpoint ['90]—S. & P. *873*. Frequent—*Fl. NE.*
39	Antrim	Greencastle '86—P. Frequent—*Fl. NE.*

Probably frequent round the coast.

Glyceria Borreri Bab.

12 Wexford Wexford railway station, and north of the harbour, '96 —Marshall *537*.
21 Dublin Booterstown '00—Colgan. Around Dublin Bay only.

Festuca rigida Kunth. Fescue (genus).

Census 36—East 14, Centre 11, West 11.

Divisions all, *except 29 Leitrim, 33 Fermanagh, 36 Tyrone, 40 Derry.* Generally abundant, especially on the limestone, except in the north. Common in 4, 5, 6, 11, 14, 15, 17, 18, 21, 22, 23, 25. Frequent in 1, 2, 3, 7, 8, 9, 10, 12, 13, 19, 24, 31, 37. Rare in the following:—

16 Galw. W. Oughterard '99—P. East margin only, frequent.
20 Wicklow Wicklow '97, Bray '94—P.
26 Mayo E. Clonbur and Cong '95—M. & S. *545*.
27 Mayo W. Ballina '00—P.
28 Sligo Rosses Point '00—West. Ballysadare '00—P.
30 Cavan Mount Nugent '96, Drumhawnagh '00—P.
32 Monaghn. Glasslough '00—Waddell. Monaghan '00—Somerville.
34 Dongl. E. Near Ballyshannon—*Fl. Don.*
35 Dongl. W. Rathmullan—*Fl. Don.* Glencolumbkill—*Cyb.* I.
38 Down Ardglass '92—P. Very rare—*Fl. NE.*
39 Antrim Magheramorne '93—P.

Festuca rottbœllioides Kunth (*F. loliacea* Huds.).

Census 21—East 10, Centre 0, West 11.

1 Kerry S. Kenmare '99 : rather frequent—Scully.
2 Kerry N. Ballybunnion '99 : rather frequent—Scully.
3 Cork W. Bantry '98 : frequent on coast—Phillips.
4 Cork Mid Crosshaven '00 : frequent on coast—Phillips.
5 Cork E. Whitegate, &c. '00 : frequent on coast—Phillips.
6 Waterfd. Tramore '00—Phillips. Dungarvan '99—P.
9 Clare Murrough '96—O'Kelly. Frequent on the Aran Isles.
12 Wexford Carnsore '97—Marshall. Coast, local.
15 Galw. SE. Rinville '00—P.
16 Galw. W. Near Galway '99—P. Inishbofin—More *616*.
17 Galw. NE. Rinmore '00—Phillips.
20 Wicklow Arklow '94—P. Frequent on coast.
21 Dublin Howth '00 : frequent by coast—Colgan.
27 Mayo W. Mallaranny '99—Marshall.
28 Sligo Strandhill '97—P.

31 Louth Greenore '00—P.
34 Dongl. E. Clonmany '98—Hart *405*. Inishowen only.
35 Dongl. W. Bloody Foreland, &c.: throughout frequent—*Fl. Don.*
38 Down Ardglass '97—P. Rare—*Fl. NE.*
39 Antrim Rathlin '93—P. Rare—*Fl. NE.*
40 L'derry Castlerock '88—P. Portstewart—*Fl. Ulst.*

Around the coast, rather local.

Festuca uniglumis Soland.

Census 5—East 5, Centre 0, West 0.

12 Wexford Courtown '97—P. East coast frequent.
20 Wicklow Arklow and northwards to Rockfield—More '72 *614*.
21 Dublin Portrane '00: local—Colgan.
22 Meath Laytown and Boyne mouth '96—P.
31 Louth Baltray '96—P.

East coast from Wexford Harbour to the Boyne. The northern records of *Fl. Ulst.* are errors.

Festuca Myuros L.

Census 22—East 9, Centre 7, West 6.

1 Kerry S. Kenmare '99: rather frequent but local—Scully.
2 Kerry N. Abbeydorney '99: rather frequent—Scully.
3 Cork W. Timoleague, &c. '96: frequent in south—Phillips.
4 Cork Mid. Blackrock '00: common—Phillips.
5 Cork E. Little Island '00: common—Phillips.
6 Waterfd. Dungarvan '99: common throughout—P.
7 Tipp. S. Cahir '00—P. Common.
8 Limrck. Adare '99—Somerville. Glin; Doon; Askeaton.
9 Clare Killaloe '99—P. Ballyvaughan (Allin)—More *614*.
10 Tipp. N. Nenagh and Ballina '99—P.
11 Kilkny. Thomastown '98: common throughout—P.
12 Wexford Wexford, Gorey, '97—Marshall *539*. Enniscorthy.
13 Carlow Leighlinbridge '99: common in Barrow valley—P.
14 Queen's Durrow '98, Mountrath '97—P.
15 Galw. SE. North of Gort '00—P.
17 Galw. NE. Tuam '99—P.
18 King's Frankford '00, Kinnitty, Birr, Clara—P.
19 Kildare Kilkea Castle '99, Levitstown, Athy, Leixlip—P.
20 Wicklow Baltinglass '99—P. Arklow, Wicklow—More *614*.

21 Dublin Near Knockmaroon '00: very rare—Colgan.
23 Westmth. Moate '99—P.
26 Mayo E. Near Hollymount, More—*Cyb.* I.

Common in the southern half of Ireland. The northern records of *Fl. Hib.*, &c., no doubt refer to *F. sciuroides.*

Festuca sciuroides Roth.

Divisions all. Common.

Festuca ovina L.

Divisions all. Abundant.

Festuca rubra L.

Divisions all. Common.

Festuca sylvatica Vill.

Census 18—East 9, Centre 3, West 6.

2 Kerry N. Derrycunihy '98—P. Listowel—Scully *830.*
5 Cork E. Glanmire '00—Phillips.
6 Waterfd. Lismore '99—P. Morgan's glen, Miss Grubb—*Cyb.* I.
11 Kilkny. Inistioge '00—Phillips.
12 Wexford Newtownbarry—Wade 1804 *902.*
14 Queen's Cullenagh Mountain '96—P.
15 Galw. SE. Dalystown '98—P.
20 Wicklow Avondale '99—P. Frequent towards the north-east.
23 Westmth. Knock Ross—Levinge '94 *484.*
27 Mayo W. Lough Cullin and Lough Conn, More—*Cyb.* I.
28 Sligo Knocknarea glen '97—P.
34 Dongl. E. Buncrana—*Fl. Don.*
35 Dongl. W. Glenties, &c.: in N. and S., very rare—*Fl. Don.*
36 Tyrone Mullaghcarn and Strabane glen '96—Miss Knowles.
37 Armagh Tanderagee demesne '92—P.
38 Down Tollymore Park '00—P. Rostrevor—Wade *902.*
39 Antrim Glendun, &c., D. Moore—*Cyb.* I. Very rare—*Fl. NE.*
40 L'derry Errigal Banks '94—P. Very rare.

Festuca elatior L.

Divisions all, *except 6, 13, 16, 32.* Frequent, and no doubt universal.

Festuca arundinacea Schreb.

Divisions all, *except 24, 25.* Frequent, especially on the coasts; probably in all divisions.

Bromus giganteus L.

Divisions all, *except 31 Louth.* Widely distributed, but generally not common.

Bromus asper Murr.

Divisions all, *except 27 Mayo West.* Frequent, but somewhat local.

Bromus erectus Huds.

Census 9—East 3, Centre 3, West 3.

7	Tipp. S.	†Railway bank at Cahir '00—P.
9	Clare	Glenforth near Ballyvaughan, c., O'Kelly—*Cyb.* II.
12	Wexford	*Clonroche, one plant—B. & M. '92 *102.*
14	Queen's	Railway banks near Portarlington—More '72 *614.*
15	Galw. SE.	Garryland, More—*Cyb.* I.
20	Wicklow	Bray Head—More '72 *614.*
21	Dublin	Raheny '00: local—Colgan.
23	Westmth.	†Knock Drin—Levinge '94 *484.*
34	Dongl. E.	*By Great Northern Railway above Derry—*Fl. Don.*

‡**Bromus madritensis** L. (*B. diandrus* Curt.)

6	Waterfd.	Carrickbeg! '00—Phillips. *Waterford—B. & G. *100.*
7	Tipp. S.	Carrick-on-Suir '00—P.
21	Dublin	*Liffey Junction '94—P.

Long established at Carrick-on-Suir, where it grows abundantly on walls. Probably merely casual elsewhere.

Bromus sterilis L.

Census 32—East 15, Centre 9, West 8.

1	Kerry S.	†Castlegregory '94: rare and local—Scully.
2	Kerry N.	Spa '99: rather frequent—Scully.
3	Cork W.	Timoleague '97: rare—Phillips.
4	Cork Mid	Ovens '96: frequent—Phillips.
5	Cork E.	Youghal '00: frequent—Phillips.
6	Waterfd.	Dungarvan '99: frequent—P.
7	Tipp. S.	Cahir '00: common—P.
8	Limrck.	Lough Gur and Limerick '00—P.

9	Clare	Ballyvaughan '95—Colgan. Near Kilnaboy—Corry *240*.
10	Tipp. N.	Nenagh '99—P. Dromineer '96—Colgan.
11	Kilkny.	Kilkenny '98, Ballyragget, Thomastown—P.
12	Wexford	Rosslare '97—Marshall *539*. Frequent in the south.
13	Carlow	Leighlinbridge '99: frequent—P.
14	Queen's	Abbeyleix '98, Stradbally '97—P.
15	Galw. SE.	Near Woodford '98, Lough Cooter '00—P.
17	Galw. NE.	Barbersfort '99—P.
18	King's	Birr '00—Phillips. Frequent—P.
19	Kildare	Kilkea Castle '99, Carbury, Kildare—P.
20	Wicklow	Bray '00—P.
21	Dublin	Skerries '00: frequent—Colgan.
22	Meath	Navan '00, Bective, Enfield, Oldcastle—P.
23	Westmth.	Athlone '99—P.
24	Longfd.	Elfeet Bay '00, Priest's Island '99—P.
25	Roscomn.	Roscommon '97, Athlone '98—P.
31	Louth	Ballymascanlan '00, and frequent southward—P.
34	Dongl. E.	‡Near Londonderry and Ballyshannon—*Fl. Don.*
35	Dongl. W.	‡Fanet—*Fl. Don.*
36	Tyrone	Omagh '96—Miss Knowles.
37	Armagh	Loughgall and Navan Fort '92—P.
38	Down	Marino '00—P. Rare—*Fl. NE.*
39	Antrim	Ballycastle '93—P. Rare—*Fl. NE.*
40	L'derry	Kilrea '93—Mrs. Leebody. Limavady—*Fl. NE.*

Widely spread over the southern half of Ireland. Rare and local in the northern half, and almost absent from the western portion. Prefers the limestone.

*Bromus secalinus L.

Census 12—East 9, Centre 1, West 2.

3	Cork W.	Castlefreke '90—Phillips.
4	Cork Mid	Ovens '96: rare—Phillips.
5	Cork E.	Tivoli '94: rare—Phillips.
6	Waterfd.	Cappoquin '99—P.
12	Wexford	Enniscorthy '98—P.
21	Dublin	Greenfields—*Fl. Howth* '87. Very rare.
31	Louth	Queensborough '96—P. Collon—White 1808 *914*.
35	Dongl. W.	Lennan River—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles.

38 Down Holywood, casual only, '96—P.
39 Antrim Lisburn '88—P. Very rare.
40 L'derry Ballyronan, W. T. Whan—*Fl. Ulst.* '64.

Round the east side of Ireland from Cork to Donegal. Apparently little more than a casual except at the southern extremity of its range.

Bromus commutatus Schrad.

Census 18—East 5, Centre 7, West 6.

4 Cork Mid Donoughmore '96: frequent—Phillips.
5 Cork E. Youghal and Ballycotton '96: frequent—Phillips.
6 Waterfd. Carrickbeg '00—Phillips.
7 Tipp. S. Bansha '00—Phillips. Near Golden—Hart *385*.
8 Limrck. Limerick '99—Somerville.
12 Wexford Two miles south of Wexford '97—Marshall *539*.
14 Queen's Maryborough '96—P. Near Two-mile bridge—Hart *383*.
15 Galw. SE. Castle Taylor—More '55 *598*. Near Portumna—*Cyb.* I.
17 Galw. NE. Clonbrock '96—P.
18 King's Geashill '94—P. Portarlington, Mountmellick—*383*.
23 Westmth. Knock Drin '94—Levinge *485*.
27 Mayo W. Railway at Newport '99—Marshall.
28 Sligo Near Milltown '84—B. & V. *112*.
30 Cavan Lough Ramor '96—P.
34 Dongl. E. By Finn, Termon, and Eske rivers—*Fl. Don.*
35 Dongl. W. Milford Lake—*Fl. Don.*
36 Tyrone Strabane '96—Miss Knowles.
37 Armagh Armagh '80—W. F. Johnson! Tartaraghan—More *600*.

The claim of this species to native rank has sometimes been questioned, but it appears indigenous in most of its stations. Distribution not yet worked out.

Bromus racemosus L.

Census 10+(1)—East 4+(1), Centre 3, West 3.

8 Limrck. Foynes '85–6—Stewart *863*.
9 Clare Kilrush '85–6—Stewart *863*.
17 Galw. NE. Clonbrock '96—P. (*fide* A. Bennett.)
(21 Dublin Between Dublin and Glasnevin—*Ir. Fl.* '33. ?—Colgan.)
23 Westmth. Knock Drin—Levinge '94 *484*.
25 Roscomn. Arigna '84—Stewart *859*.
29 Leitrim Drumshanbo '84—Stewart *859*.

31 Louth Soldier's Point '96—P. (*fide* A. Bennett).
38 Down Holywood '86—P. (*fide* A. Bennett).
39 Antrim Templepatrick, Stewart: frequent—*Fl. NE.*
40 L'derry Near Coleraine, D. Moore—*Fl. NE.*

Possibly frequent. Not sufficiently distinguished from the preceding species, to which some of the records given may possibly belong.

Bromus mollis L.

Divisions all, *except 24 Longford.* Common.

Brachypodium sylvaticum R. & S.

Divisions all. Common.

Brachypodium pinnatum Beauv.

6 Waterfd. Sandhills at Tramore! '99—Phillips.

The plant looks perfectly native in this, its only Irish habitat.

Lolium perenne L. Rye-grass.

Divisions all. Common.

†Lolium temulentum L. Darnel.

Census 30—East 13, Centre 8, West 9.

Divisions all, *except 8, 10, 13, 26, 27, 29, 30, 33, 35, 37.* Frequent, and no doubt in all or nearly all the divisions.

Agropyron caninum Beauv. Wheat-grass (genus).

Census 18—East 9, Centre 5, West 4.

3 Cork W. Bantry '98—Phillips.
4 Cork Mid Blarney and Coolmore—Power *Fl.* '45. Rare—Phillips.
5 Cork E. Fermoy (Chandlee and Carroll)—Allin *Fl.* '83. Rare.
8 Limrck. Shannon estuary '85—Stewart.
9 Clare Inishmore '90—Nowers & Wells *651*. Shannon- *863*.
11 Kilkny. Kilmacow, Chandlee—*Cyb.* I.
13 Carlow Ballintemple '81—Hart *371*.
15 Galw. SE. Garryland wood, More—*Cyb.* I.
20 Wicklow Powerscourt woods, D. Moore—*Cyb.* I.
21 Dublin Lucan '96—P. Rare—Colgan.
23 Westmth. Knock Ross—Levinge '94 *484*.
30 Cavan Ballyconnell '00—Somerville.

33	Ferman.	Left bank of R. Erne below Belleek, More—*Cyb.* II.
34	Dongl. E.	Buncrana and along the Erne—*Fl. Don.*
36	Tyrone	Victoria mills '00, Omagh '96—Miss Knowles.
37	Armagh	Mullaghmore Lough '92—P.
38	Down	Newcastle '97—P. Rare—*Fl. NE.*
39	Antrim	Craigbilly '00—Miss Knowles.

Apparently rare, but its distribution is not yet worked out.

Agropyron repens Beauv.

Divisions all, *except 24 Longford, 27 Mayo West.* Generally common, and no doubt universal.

Agropyron pungens R. & S.

Census 6—East 5, Centre 0, West 1.

5	Cork E.	Little Island '91—Phillips.
6	Waterfd.	Waterford, Babington *in hb.*—*Cyb.* II.
12	Wexford	North side of Wexford Harbour '96—Marshall *537*.
15	Galw. SE.	Kilcolgan estuary '99—P.
20	Wicklow	Frequent on the Murrough—More '72 *614*.
21	Dublin	Shore near Skerries '00 : ? rare—Colgan.

Distribution not yet worked out.

Agropyron acutum R. &. S.

Census 9—East 5, Centre 0, West 4.

1	Kerry S.	Castlegregory '94: rare—Scully.
3	Cork W.	Castlefreke '90—Phillips. Rosscarbery—Allin *Fl.*
5	Cork E.	Youghal '00—Phillips.
20	Wicklow	Murrough—*Cyb.* I.
31	Louth	Near Queensborough '96—P.
34	Dongl. E.	In the north and south, frequent—*Fl. Don.*
35	Dongl. W.	Throughout the coast, frequent—*Fl. Don.*
38	Down	Ballyhornan (Stewart)—S. & P. *874*.
39	Antrim	Redbay '93—Shoolbred *837*.

Distribution still quite imperfectly known: perhaps frequent round the coast.

Agropyron junceum Beauv.

In most of the maritime divisions, namely:—1, 2, 3, 5, 6, 9, 12, 16, 20, 21, 22, 27, 28, 31, 34, 35, 38, 39, 40. Frequent on sandy coasts.

Lepturus filiformis Trin.

Census 19—East 13, Centre 0, West 6.

1	Kerry S.	Castlegregory '94: very local—Scully.
2	Kerry N.	Barrow Harbour '92: rare, locally abundant—Scully.
3	Cork W.	"Common by the sea"—Allin *Fl.* '83.
4	Cork Mid	Rochestown '00: rare—Phillips.
5	Cork E.	Near Glanmire '00: frequent near the sea—Phillips.
6	Waterfd.	Tramore '99—P.
9	Clare	Aran—Mackay 1806 *521*.
11	Kilkny.	Granny '98—P.
12	Wexford	Fisherstown '93 (Miss Glascott)—B. & M. *MS.*
20	Wicklow	Newcastle '94—P.
21	Dublin	North Bull '00: local—Colgan.
22	Meath	Boyne and Nanny estuaries '96—P.
31	Louth	Dundalk '96: frequent—P.
34	Dongl. E.	Buncrana and Donegal—*Fl. Don.*
35	Dongl. W.	Gweebarra River, &c.: rare—*Fl. Don.*
37	Armagh	Estuary of Newry River '92—P.
38	Down	Victoria Park '00—Waddell. Rare—*Fl. NE.*
39	Antrim	Larne Lough (D. Moore)—S. & P. '95 *874*.
40	L'derry	Lough Foyle and mouth of Roe, D. Moore—*Fl. NE.*

Local round the coast, but possibly overlooked in some divisions. There is only one recorded West Coast station between Kerry and Donegal, but it is entered in *Cyb.* I. as occurring in Districts VI., VIII., and IX.

Nardus stricta L. Matweed.

Divisions all, *except 23 Westmeath*, in which it will no doubt be found. Calcifuge. Locally abundant.

Hordeum secalinum Schreb. Barley (genus).

Census 10+(2)—East 9+(1), Centre 1+(1), West 0.

4	Cork Mid	Near Blackrock '94—Phillips. Douglas—Power *Fl.*
5	Cork E.	Little Island '00—Phillips.
6	Waterfd.	Marsh under Blenheim Hill—B. & G. '89 *100*.
8	Limrck.	Newtown '00—O'Brien! Ringmoylan—Stewart *863*.
11	Kilkny.	Ballinlaw '99—P. Near Ballyneale '84—Hart *388*.
12	Wexford	Kilmanock and New Ross frequent—B. & G. '89 *100*.
20	Wicklow	Murrough, D. Moore—*Cyb.* I.
21	Dublin	Broad Meadow '91 (Barrington): rare—Colgan.

(23 Westmth. Knock Drin, one large plant—Levinge '94 *484*.)
37 Armagh Tartaraghan '80 (G. Robinson)—P. *701*.
(38 Down Connswater 1806, Templeton—*Fl. NE.*)
39 Antrim Springfield Road '86 [now destroyed—Stewart], Whitehouse '69—*Fl. NE.*

Very local, and almost confined to the coast on the eastern side of Ireland.

†Hordeum murinum L.

Census 10+(3)—East 7+(3), Centre 2, West 1.

(4 Cork Mid Near Douglas—Power *Fl.* '45. Casual—Phillips.)
5 Cork E. *Fort Carlisle and Haulbowline '00—Phillips.
8 Limerick Limerick '97, Bentley—*Hb.* L.F.C!
15 Galw. SE. Ballinasloe, Foot—*Cyb.* I.
11 Kilkny. Thomastown '00—Phillips. Gowran—*Cyb.* II.
19 Kildare Leixlip '96—P.
20 Wicklow Bray, More—*Cyb.* II. Murrough, D. Moore—*Cyb.* I.
21 Dublin Baldoyle '00 : frequent—Colgan.
22 Meath Navan '00—P.
25 Roscomn. Athlone, Foot—*Cyb.* I.
31 Louth Carlingford castle, Hyndman—*Fl. Ulst.* '64.
(38 Down Holywood, casual, '86—P.)
(39 Antrim Garrron Point '61 (Lett)—S. & P. *874*.)

Thoroughly established and possibly native about towns in eastern Ireland, especially in Co. Dublin ; becoming merely casual in the north and south, and also (?) in the west.

Elymus arenarius L. Lyme-grass.

Census 5—East 2, Centre 0, West 3.

12 Wexford Carnsore '97—Marshall. South-east, very local.
21 Dublin Skerries '00—Colgan. Introduced near Bray.
28 Sligo Mullaghmore, Admiral Jones—*Cyb.* I.
34 Dongl. E. Glennagivney Bay, &c. : rare—*Fl. Don.*
35 Dongl. W. Kincashla, &c. : very local—*Fl. Don.*

The Cork stations are doubtful, and the Down records errors.

Hymenophyllum tunbridgense Smith. Filmy Fern (genus).

Census 23—East 8, Centre 6, West 9.

1 Kerry S. Waterville '00 : frequent—Scully.
2 Kerry N. Killarney '00 : local, and south only—Scully.
3 Cork W. Ballydehob '96 : rare—Phillips.

4	Cork Mid	Ballinhassig glen '98 : rare—Phillips.
5	Cork E.	Glenbower woods '93—C.N.F.C. *231*. Rare—Phillips.
6	Waterfd.	Comeraghs '93—Grubb *356*. Rare.
7	Tipp. S.	Above Lough Curra in the Galtees '80—Hart *372*.
8	Limrck.	Glenstal '80—Hart *369*. Clare River—Kinahan *463*.
9	Clare	Owenslieve R. '79—Corry *240*. Chiefly in west, rare.
10	Tipp. N.	Castlewaller—Kinahan '59 *463*. Keeper range—*444*.
11	Kilkny.	Near Brandondale, Miss Farmer—*Cyb*. II.
12	Wexford	Tara Hill '92—Cuthbert *250*. Belmont—B. & M. *MS*.
16	Galw. W.	Skultha mountain '98—Colgan. Widespread, frequent.
24	Longfd.	Six miles south of Longford—Foot '64 *327*.
27	Mayo W.	Croaghaun '99—Colgan. Achill district chiefly, frequent.
28	Sligo	South shores of Lough Gill—Foot '66 *329*.
29	Leitrim	Slieve Anieran (J. Butler)—Foot '66 *330*.
31	Louth	Ferry Hill near Narrow-water '93—P.
33	Ferman.	Carrick '00—West & Tetley! Florencecourt—*678*.
35	Dongl. W.	Glenveagh, Lough Eske, &c.: very local—*Fl. Don*.
36	Tyrone	Near Favour Royal '87—Hart *392*. Clogher—*614*.
37	Armagh	Ferry Hill near Narrow-water '93—P.
39	Antrim	Glendun—Brenan '84 *166*.

Chiefly in the south, west, and north. Local and usually rare.

Hymenophyllum unilaterale Bory.

Census 26—East 9, Centre 6, West 11.

1	Kerry S.	Glencar '99 : frequent—Scully.
2	Kerry N.	Derrycunihy '98—P. Local, and south only—Scully.
3	Cork W.	Berehaven '94 : rare—Phillips.
6	Waterfd.	Frequent on the Comeraghs '82–3—Hart *381*.
7	Tipp. S.	Muskry L. in Galtees '00—P. Knockmealdowns—Hart.
9	Clare	Cloonagroo, Feakle, Glendree, '60—Kinahan *445*.
12	Wexford	Near summit of Blackstairs—B. & M. '93 *103*.
13	Carlow	Mount Leinster '00—T. Hartley! Blackstairs—Hart.
14	Queen's	Arderin '97—P.
15	Galw. SE.	Derrygoolin '60—Kinahan *445*.
16	Galw. W.	Lisoughter '98—Colgan. Widespread and frequent.
20	Wicklow	Lugnaquilla '97—Colgan. On the mountains, rare.
21	Dublin	Upper Glenasmole '83 (C. F. D'Arcy)—Colgan.
26	Mayo E.	Glendaduff '00—P.
27	Mayo W.	Nephin '00—P. Frequent.
28	Sligo	Knockachree '96—Colgan. Annacoona; Moygara.

29	Leitrim	Glenade '99—P. Slieveanieran, Benbo—Stewart.
30	Cavan	Slievenakilla '84, f. in NW. '81—Stewart *854*, *859*.
31	Louth	Carlingford Mountain '93—P.
33	Ferman.	Carrick glen '00—West and Tetley! Frequent in SW.
34	Dongl. E.	Raughtin More '98—Hart *405*. R. in N., f. in S.
35	Dongl. W.	Errigal, &c.: in north and south, frequent—*Fl. Don.*
36	Tyrone	Gortin Gap '57—Kinahan *460*.
38	Down	Tollymore Park '00—P. Mournes frequent.
39	Antrim	Fair Head! '99—Miss Knowles. Rare—*Fl. NE.*
40	L'derry	Benbradagh, &c., D. Moore: rare—*Fl. NE.*

Trichomanes radicans Swartz. Killarney Fern.

Census 12+(1)—East 3+(1), Centre 4, West 5.

1	Kerry S.	Brandon '85, D'Arcy—*Cyb.* II. Very rare.
2	Kerry N.	Torc '89: now very rare—Scully.
3	Cork W.	Near Adrigole '94: very rare—Phillips.
4	Cork Mid	Clashgariffe river near Coachford—Drummond '20 *287*.
5	Cork E.	Near Kildorrery '52—Carroll *192*. Very rare.
6	Waterfd.	Blackwater valley '52—Kinahan *460*. Very rare.
8	Limrck.	Near Glenstal (C. B. Barrington)—Hart '81 *369*. V. r.
9	Clare	South-west of Ennis '79—Corry *240*.
10	Tipp. N.	Near Glenstal (Croker Barrington)—Hart '81 *369*. V. r.
(20	Wicklow	Powerscourt, Hermitage Glen—*Fl. Hib.* '36. Extinct.)
33	Ferman.	Near Carrick '00—Tetley!
35	Dongl. W.	Poisoned Glen '84 (Mahony), L. Eske '84—*Fl. Don.*
36	Tyrone	Near Strabane '91 (G. G. Delap)—Delap *274*.

No doubt extinct in Wicklow, and being rapidly exterminated in the south, where it was formerly locally abundant.

Adiantum Capillus-Veneris L. Maidenhair.

Census 6—East 0, Centre 0, West 6.

9	Clare	Black Head '99—Miss Knowles. Burren local, Aran f.
16	Galw. W.	Lough Bollard '96—P. *754*.
27	Mayo W.	Croaghaun '82—Hart *380*. Sheffey—Kinahan *448*.
28	Sligo	Dromore '91—Warren *905*. Rosses; Grange; Drumcliff.
29	Leitrim	Glencar—Wynne '56 *921*.
35	Dongl. W.	Slieve League to Muckross Point—*Fl. Don.*

West coast from Clare to Donegal, generally on limestone; in quantity in Clare only. Reported from Antrim and elsewhere, but no specimens forthcoming.

Pteris aquilina L. Bracken.

Divisions all. Abundant.

Cryptogramme crispa R. Br. Parsley Fern.

Census 6—East 4, Centre 1, West 1.

31	Louth	Carlingford Mountain '00—P.
33	Ferman.	Cuilcagh, J. McDonald—*Cyb.* I.
35	Dongl. W.	Alt Mountain—*Fl. Don.*
38	Down	Blue Lough '92—P. Mournes only, very rare.
39	Antrim	Fair Head '97, D'Arcy—*Cyb.* II. Very rare.
40	L'derry	Clontygearagh Mountain, D. Moore—*Cyb.* I.

North only, extremely rare in all its stations.

Blechnum Spicant Roth. Hard Fern.

Divisions all, *except 23 Westmeath.* Locally abundant; conspicuously calcifuge.

Asplenium lanceolatum Huds. Spleenwort (genus).

1	Kerry S.	Camp '92—Scully.
3	Cork W.	Cape Clear '96: rare—Phillips.
4	Cork Mid	Coachford '97, Kinsale '93—Phillips.

Asplenium Adiantum-nigrum L. Black Spleenwort.

Divisions all, frequent; usually more abundant on non-calcareous rocks. Rare in 14, 18, 22, 23, 24, 25, and 33: and it will be observed that in all these divisions limestone largely predominates.

Asplenium marinum L. Sea Spleenwort.

Census 20—East 10, Centre 0, West 10.

1	Kerry S.	Kenmare '99: frequent—Scully.
2	Kerry N.	Ballybunnion '94: frequent—Scully.
3	Cork W.	Baltimore '96: frequent—Phillips.
4	Cork Mid	Crosshaven '00: frequent—Phillips.
5	Cork E.	Power Head '98: frequent—Phillips.
6	Waterfd.	Ballyvoyle Head '99—P. Frequent—Hart *384*.
9	Clare	Ballyvaughan '95—Colgan. Common.
11	Kilkny.	Snowhill '99—P.
12	Wexford	Near Tara Hill '92—Cuthbert *250*. Frequent.

16	Galw. W.	Inishmacdara '96—P. ? Rare.
20	Wicklow	Bray Head '00—P. Silver Strand—Miss C. L. Adams.
21	Dublin	Howth Head '93 : rare—Colgan.
27	Mayo W.	Achill Island '98—P.
28	Sligo	Dromore West '96—Colgan. Inishmurray '96—P.
29	Leitrim	On the coast '99—P.
34	Dongl. E.	Coast in north and south, frequent—*Fl. Don.*
35	Dongl. W.	Frequent—*Fl. Don.*
38	Down	Newcastle '90—P. Portavoe—W. H. Patterson!
39	Antrim	Murlough Bay '97—P. Frequent—*Fl. NE.*
40	L'derry	Benevenagh '93—Shoolbred *837*. Frequent—*Fl. NE.*

On rocky coasts of the open sea except for the interesting station by the Upper Lake of Killarney (see *Cybele*), the Kilkenny habitat by the tidal Suir, and the cliffs of Benevenagh in Derry.

Asplenium viride Huds. Green Spleenwort.

Census 12—East 1, Centre 2, West 9.

1	Kerry S.	Brandon '94 : rare and local—Scully.
2	Kerry N.	Mangerton '96—Scully. Torc Mtn.—Mackay *522*.
3	Cork W.	Millstreet mountains '00—Phillips. Very rare.
6	Waterfd.	Near Knockmealdowns '94, Miss Chearnley—*Cyb.* II.
7	Tipp. S.	Muskry Lough '00—P. Galtees frequent—Hart *372*.
16	Galw. W.	Lisoughter '00—Colgan. Very rare—Hart *380*, &c.
27	Mayo W.	Croaghpatrick '82—Hart *380*. Dromin—Kinahan *448*.
28	Sligo	Knocknarea '97, G. P. Farran! Limestone mtns. f.
29	Leitrim	Glenade '00—P. Faughrey mountain '96—Colgan.
33	Ferman.	Near Florencecourt (T. Plunkett)—Phillips & P. *678*.
34	Dongl. E.	Convoy and about Lock Eske—*Fl. Don.*
35	Dongl. W.	Muckish, Slieve League, &c. : very local—*Fl. Don.*

Mountains of the south and west, from Waterford to Donegal.

Asplenium Trichomanes L. Maidenhair Spleenwort.

Divisions all. Frequent.

Asplenium Ruta-muraria L. Wall Rue.

Divisions all. Frequent.

Athyrium Filix-fœmina Roth. Lady Fern.

Divisions all. Locally abundant. Strongly calcifuge.

Ceterach officinarum Willd. Scale Fern.

Divisions all. Calcicole: often abundant on the limestone, especially in the south and west; generally local on non-calcareous rocks. Rare in the east and north, in 20 to 22, and 30 to 40; for these divisions particulars are subjoined:—

20	Wicklow	Near Laragh '94 and Delgany '93—P. Very local.
21	Dublin	Whitestown '00: rare—Colgan.
22	Meath	Beauparc '00: widespread but rare—P.
30	Cavan	Ballyconnell '00—Somerville.
31	Louth	Anagassan '96—P.
32	Monaghn.	Monaghan '00—Waddell.
33	Ferman.	Carragh Creagh '00—West and Tetley.
34	Dongl. E.	Near Derry, Belleek, &c.: very rare—*Fl. Don.*
35	Dongl. W.	Near Ardara, &c.: very rare—*Fl. Don.*
36	Tyrone	Near Cappagh—Kinahan '58 *460*.
37	Armagh	Armagh '92: rare—P.
38	Down	Crossgar and Saintfield '00—Waddell. Rare—*Fl. NE.*
39	Antrim	Park mill above Glenarm '87—P. Rare—*Fl. NE.*
40	L'derry	Near Derry ['94] (Mrs. Bernard)—S. & P. *874*.

Scolopendrium vulgare Smith. Hart's-tongue.

Divisions all. Common.

Cystopteris fragilis Bernh. Brittle Fern.

Census 32—East 9, Centre 11, West 12.

1	Kerry S.	Brandon '94: rare and local—Scully.
2	Kerry N.	Mangerton '96: rare and local—Scully.
3	Cork W.	Millstreet mtns. '00—Phillips. Glengariff—Allin *Fl.*
6	Waterfd.	Coumshingaun '82–3—Hart *381*. Dunmore E.—*614*.
7	Tipp. S.	Muskry L. '00—P. L. Curra—Hart *372*. Galtees only.
9	Clare	Black Head '99—Miss Knowles. Burren c.; Scarriff.
10	Tipp. N.	Keeper Hill '80—Hart *369*.
13	Carlow	Killedmond '98—P. Carlow (R. C. Browne)—*614*.
14	Queen's	Ballybrophy '00—Phillips. Glenbarrow—Hart *383*.
15	Galw. SE.	Loughrea '97—P. Throughout, not rare.
16	Galw. W.	Muckanaght '98—Colgan. Centre and east, rare.
17	Galw. NE.	Near Tuam '99—P. Clonbrock '96—R. E. Dillon!
19	Kildare	Monasterevan '84—Hart *383*.
20	Wicklow	Lugduff '99, and Maulin mountain '80—C. F. D'Arcy.

22	Meath	Slieve-na-calliagh '00—P.
23	Westmth.	Near Sonna House '99—P. Near Ballymore—Foot *325*.
24	Longfd.	Cashel Lodge '99—W. de V. Kane!
25	Roscomn.	Arigna '84—Stewart *859*. Local, not common.
26	Mayo E.	Claremorris '00, Callow, Kilmovee—P. Cong—*545*.
27	Mayo W.	Mallaranny '99—Marshall. Loughty mtn.—Hart *380*.
28	Sligo	Knocknarea '97 : frequent in eastern half—P.
29	Leitrim	Annaghearly L. '99 : common in N., rare in S.—P.
30	Cavan	Common in the north-west '81—Stewart *854*.
32	Monaghn.	Anketell Grove, Miss Maffett—*Cyb.* I.
33	Ferman.	Florencecourt '00—P. Frequent in the south-west.
34	Dongl. E.	Brown Hall '00—P. In N. and S., local—*Fl. Don.*
35	Dongl. W.	Muckish, &c. : north to south, local—*Fl. Don.*
36	Tyrone	Near Strabane '97—W. S. Johnson! Dart—*Cyb.* I.
37	Armagh	Near Keady '91—W. F. Johnson.
38	Down	Rademon '85—P. Frequent on Mournes—S. & P. *873*.
39	Antrim	Murlough Bay '97—P. Rare—*Fl. NE.*
40	L'derry	Benevenagh '93—Shoolbred *837*. Rare.

Rare in the east.

Aspidium Lonchitis Swartz. Holly Fern.

Census 6—East 0, Centre 0, West 6.

1	Kerry S.	Brandon '94—Scully. L. Googh—Hart *373*. Glencar.
2	Kerry N.	Mangerton '96—Scully.
16	Galw. W.	Muckanaght '98 (C. F. D'Arcy)—Colgan.
28	Sligo	Octogorea, &c. on Ben Bulben range '84—B. & V. *112*.
29	Leitrim	Glenade frequent '99—P.
35	Dongl. W.	Slieve League—*Fl. Don.*

On the western mountains only.

Aspidium aculeatum Swartz. Prickly Shield Fern.

Census 37—East 13, Centre 13, West 11.

1	Kerry S.	Glencar '90 : rather rare and local—Scully.
2	Kerry N.	Listowel '99 : rare and local—Scully.
3	Cork W.	Millstreet mountains '00—Phillips. Rare.
5	Cork E.	Rathcooney '96—Phillips. Rockmills—Kinahan *463*.
6	Waterfd.	Near Waterford—Miss I. Horne.
7	Tipp. S.	Vale of Aherlow, and SE. of Slievenaman, '00—P.
8	Limrck.	Foynes '85–6—Stewart *863*.

9	Clare	Lisdoonvarna '00—Miss Knowles. Frequent in N. & R.
10	Tipp. N.	Dromineer '99—P. Keeper range—Kinahan *444*.
11	Kilkny.	Tory Hill '99—P.
12	Wexford	Wexford '96—Marshall. Ballyhyland—B. & M. *MS*.
13	Carlow	Aghade '99—P. Brown's Hill, &c. (Browne)—*614*.
14	Queen's	Maryborough '96: frequent—P.
15	Galw. SE.	Marble Hill '98—P. Frequent throughout.
16	Galw. W.	Muckanaght '82—Hart *380*. Local and rare.
17	Galw. NE.	Near Tuam '99: frequent—P.
18	King's	Clonad wood '96, Edenderry, Shannon Harbour—P.
19	Kildare	Kilcullen '96, Ballymore '00—P. Levitstown—*460*.
20	Wicklow	Avondale '99—P. Frequent.
22	Meath	Navan '96: rare—P.
23	Westmth.	Knock Eyon '99—P.
24	Longfd.	Longford '98: frequent—P.
25	Roscomn.	Mount Talbot '97—P.
26	Mayo E.	Claremorris '00—P.
28	Sligo	Knockachree '96—Colgan. L. Gill '99, Knocknarea—P.
29	Leitrim	Glenade '84—B. & V. *112*.
30	Cavan	Cavan '96—P. Frequent in NW.—Stewart *854*.
31	Louth	Killencoole '96, Carlingford Mountain '82—P.
32	Monaghn.	Culloville '96—P. Frequent in the north-east.
33	Ferman.	Carrick '00—West & Tetley. Frequent in SW.—*854*.
34	Dongl. E.	Dunree (Hunter)—Hart '99 *405*. Local—*Fl. Don.*
35	Dongl. W.	Throughout, local—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles. Aughnacloy; Dungannon.
37	Armagh	Loughgall '92: frequent—P.
38	Down	Saintfield '98—Waddell. Frequent—*Fl. NE.*
39	Antrim	Glenariff '00—Miss Knowles. Frequent—*Fl. NE.*
40	L'derry	Limavady '94—Mrs. Leebody! Frequent—*Fl. NE.*

Unequally distributed, and rare in many divisions.

Aspidium angulare Kit. Soft Shield Fern.

Divisions all. Frequent, especially off the limestone.

Lastrea Thelypteris Presl. Marsh Fern.

Census 13+(1)—East 3+(1), Centre 6, West 4.

2	Kerry N.	Killarney '00—Scully.
9	Clare	Dromoland '98—W. de V. Kane! Near Ennis—*521*.
15	Galw. SE.	Lough Fingall '99—P. Portumna; Castle Taylor.

19	Kildare	Lullybeg near Robertstown (Mrs. Cooke Trench)—*614*.
(20	Wicklow	Glencree—Mackay '25 *522*. Not seen since.)
22	Meath	Drumconrath (Brenan)—More '72 *614*.
23	Westmth	Two stations on Lough Ree '98—P.; and two in centre—Levinge '94 *484*.
24	Longfd.	Lough Ree below Ballymahon '00—P.
25	Roscomn.	Above Athlone '99—P. Rockingham (D. Moore)—*614*.
26	Mayo E.	Lake View '96, Miss Jackson—*Cyb.* II. Moore Hall.
30	Cavan	Near Belturbet, D. Moore—*Cyb.* I.
34	Dongl. E.	Below Belleek and near Ballintra—*Fl. Don.*
36	Tyrone	Near Caledon, Armstrong—B.N.F.C. '89 *117*. V. r.
39	Antrim	Portmore, D. Moore—*Cyb.* I. Ballyclare—*Fl. Ulst.*

Lastrea Oreopteris Presl. Sweet Mountain Fern.

Census 30—East 11, Centre 10, West 9.

1	Kerry S.	Castlegregory '94: locally abundant—Scully.
2	Kerry N.	Killarney '96: chiefly in the south—Scully.
3	Cork W.	Comhoola valley near Bantry '98: rare—Phillips.
6	Waterfd.	Near Coumduala '82–3—Hart *381*. Clonmel—*460*.
7	Tipp. S.	South-west of Cahir '00—P.
8	Limrck.	Glen of Bilboa River '00—P.
9	Clare	Lisdoonvarna '00—Miss Knowles. Widespread but rare.
10	Tipp. N.	Near Devil's Bit '98—P. Keeper district frequent.
11	Kilkny.	Barleeagh wood '98—P.
12	Wexford	Urrin valley and base of Blackstairs c.—Moffat '89 *552*.
13	Carlow	Blackstairs '99, Killedmond—P. Mt. Leinster—Hart.
14	Queen's	Glendine in Slieve Bloom '97—P.
16	Galw. W.	Skultha mountain '98—Colgan. Frequent locally.
18	King's	Clonad wood '96—P.
20	Wicklow	Avondale and Shillelagh '99—P. Locally abundant.
21	Dublin	Glenasmole '00—Colgan. South only, rare.
24	Longfd.	By Lough Gowna '00—P.
25	Roscomn.	Slieve Bane and Gayfield—Foot '66 *329*.
27	Mayo W.	Mweelrea '82—Hart *380*. Owenmore River—*574*.
29	Leitrim	Glenade '99—P.
30	Cavan	Scrabby '00—P.
31	Louth	Above Narrow-water '93—P.
33	Ferman.	Florencecourt '99—West and Tetley.
34	Dongl. E.	Clonmany '98—Hart *405*. Local—*Fl. Don.*
35	Dongl. W.	Near Glenties, &c.: throughout, local—*Fl. Don.*

36	Tyrone	Omagh '96—Miss Knowles. Local, frequent.
37	Armagh	Narrow-water '93, Tanderagee demesne '92—P.
38	Down	Tollymore Park '00—P. Holywood v.r, Mournes f.
39	Antrim	Slemish '00—Miss Knowles. Local, f.—*Fl. NE.*
40	L'derry	Glenomna Water '92—P. Local, frequent—*Fl. NE.*

Chiefly about the higher grounds. Rare on the limestone, even where it rises into mountains.

Lastrea Filix-mas Presl. Male Fern.

Divisions all. Common.

Lastrea spinulosa Presl.

Census 34—East 10, Centre 13, West 11.

1	Kerry S.	Cahersiveen '56—Kinahan *460.*
2	Kerry N.	Killarney '96—Scully.
3	Cork W.	Near Lough Hyne '96—Phillips. "Common"—Allin *Fl.*
4	Cork Mid	Rochestown '98 : frequent—Phillips.
5	Cork E.	Glanmire '00 : ? frequent—Phillips.
6	Waterfd.	Curraghmore—Kinahan '58 *460.*
7	Tipp. S.	Fethard '97—P.
8	Limrck.	Near Doon '00—P.
10	Tipp. N.	Barracurra '98, Friar's L.—P. Annagh Inch—*455.*
11	Kilkny.	Urlingford '98—P.
13	Carlow	Ballintemple '99, St. Mullin's '98—P.
14	Queen's	Wood south of Maryborough '96—P.
15	Galw. SE.	Dalystown and by L. Derg below Woodford '98—P.
16	Galw. W.	Connemara—Moore : *Ferns of Gt. Britain and I.* '55.
17	Galw. NE.	Clonbrock '96—P.
18	King's	Banagher '98, Edenderry '96 : frequent—P.
19	Kildare	Nurney '97, Carbury '96—P.
20	Wicklow	Wood above Shillelagh abundant '99—P. Very rare.
22	Meath	Near Navan, Oldcastle, Lough Sheelin, '96—P.
23	Westmth.	Two stations in W.,'98—P., and two in centre—*484.*
24	Longfd.	Trillickacurry '98, Woodlawn, and near Roosky—P.
25	Roscomn.	Mote Park '97, Lough Arrow, Athlone—P.
26	Mayo E.	Kilmovee '99—P.
27	Mayo W.	Mallaranny, Newport, '99—Marshall. Lough Cullin.
28	Sligo	Annaghmore '00, L. Arrow—P. Hazelwood—*Cyb.* I.
29	Leitrim	Lurganboy and frequent in the south-east '99—P.

30	Cavan	Lough Oughter and Mount Nugent '96—P.
31	Louth	Ardee and Braganstown bogs '97—P.
32	Monaghn.	Dartrey (Newman)—Moore: *Ferns of Gt. Britain & I.* '55.
33	Ferman.	Enniskillen '00—P.
34	Dongl. E.	Near Barnesmore—*Fl. Don.*
35	Dongl. W.	Lough Eske—*Fl. Don.*
36	Tyrone	Near Verner's Bridge '96—Mrs. Leebody!
40	L'derry	Near Limavady '94—Mrs. Leebody! Kilrea '94—P.

Chiefly on the drained and cut-away portions of low-level bogs. Rare in woods, as at Maryborough and Shillelagh.

Lastrea dilatata Presl. Broad Fern.

Divisions all. Common.

Lastrea æmula Brackn. Bree's Fern.

Census 37—East 13, Centre 12, West 12.

1	Kerry S.	Kenmare '98—P. Common—Scully.
2	Kerry N.	Listowel '99: frequent—Scully.
3	Cork W.	Inchigeela '00: common—Phillips.
4	Cork Mid	Ovens '96: frequent—Phillips.
5	Cork E.	Glanmire '00: frequent—Phillips.
6	Waterfd.	Dungarvan '99—P. Frequent, especially in west.
7	Tipp. S.	Cahir '00—P. Frequent and locally abundant.
8	Limrck.	Doon '00—P.
9	Clare	Lisdoonvarna '79—Corry *240*. NE. and NW. local.
10	Tipp. N.	Bushfield '99—P. Keeper range—Kinahan *444*.
11	Kilkny.	Coppenagh, Barleeagh wood, '98—P. Pilltown—*460*.
12	Wexford	Wexford '96—Marshall. Chiefly in the south, rare.
13	Carlow	Killedmond and Polmounty River '98—P.
14	Queen's	Glendine in Slieve Bloom '96—P.
15	Galw. SE.	Dalystown '98, Chevy Chase '00—P. Woodford—*445*.
16	Galw. W.	Lough Inagh '98—Colgan. Widespread and frequent.
17	Galw. NE.	Dunmore '00—P.
18	King's	Clonad wood '98—P.
20	Wicklow	Shillelagh' 99—P. Frequent in the centre.
21	Dublin	Cot Brook glen, &c., very rare—Kinahan '54 *449*.
23	Westmth.	Knock Body—Levinge '94 *484*.
24	Longfd.	Lough Gowna '00—P.
26	Mayo E.	Claremorris, Callow, Glendaduff, '00—P.
27	Mayo W.	Mallaranny '99—Marshall. Very frequent.

28	Sligo	Lough Talt '96—Colgan. East half very frequent.
29	Leitrim	Garadice L. '00, Glenade, and frequent in the north—P.
30	Cavan	Lough Sheelin and Lough Gowna '85—P.
31	Louth	Carlingford Mountain '00, Ferry Hill '93—P.
32	Monaghn.	Creaghan wood '00—W. de V. Kane.
33	Ferman.	Carrick '00—Tetley! Frequent in the west.
34	Dongl. E.	Clonmany '98—Hart *405*. Frequent in N. and S.
35	Dongl. W.	Mulroy '94—Miss Thompson *885*. Frequent—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles. Frequent.
37	Armagh	Ferry Hill above Narrow-water '93—P.
38	Down	Saintfield '00—Waddell. Frequent—*Fl. NE.*
39	Antrim	Murlough Bay '97—P. Frequent—*Fl. NE.*
40	L'derry	Eglinton '98—Mrs. Leebody. Local.

In more or less abundance in all the upland portions of the country. Avoids the Limestone Plain. Attains its maximum in Cork and Kerry.

Polypodium vulgare L. Polypody.

Divisions all. Common.

Polypodium Dryopteris L. Oak Fern.

Census 4+(1)—East 1+(1), Centre 0, West 3.

9	Clare	Between Broadford and the Cliffs of Moher, T. H. Wright —*Cyb.* II.
20	Wicklow	Sheenabeg near Aughrim '79, G. H. Kinahan—*Cyb* II. Hillside overlooking Glendalough '79—Marshall *541*.
28	Sligo	Lough Talt (Warren)—More '72 *614*.
29	Leitrim	Benbo Mountain, J. Wynne—*Cyb.* I.
(39	Antrim	Knocklayd, D. Moore—*Cyb.* I. Not seen since.)

Old records from Kerry, Galway, King's Co., and Down are no doubt erroneous.

Polypodium Phegopteris L. Beech Fern.

Census 20—East 7, Centre 3, West 10.

1	Kerry S.	Owenreagh River '00: rare and local—Scully.
2	Kerry N.	Mountains east of Killarney '89—Scully.
3	Cork W.	Near Millstreet '00: rare—Phillips.
9	Clare	Glendree '60—Kinahan *445*. Very rare.
14	Queen's	Glendine in Slieve Bloom '97—P.
15	Galw. SE.	SW. of Slieve Aughta (G. H. Kinahan)—Foot '62 *324*.

16	Galw. W.	Muckanaght '98 (C. F. D'Arcy)—Colgan. Rare.
20	Wicklow	Lugduff Prisons '97—Colgan. Centre, rare.
21	Dublin	Glenasmole '00—Colgan.
27	Mayo W.	SW. of Dromin chapel—G. H. Kinahan '71 *448*. V. r.
29	Leitrim	Glenade Mountain, J. Wynne—*Cyb.* I.
31	Louth	Carlingford Mountain '00—P.
33	Ferman.	Brookeborough (Brenan)—More '72 *614*.
34	Dongl. E.	Coolcross, &c.: north only—*Fl. Don.*
35	Dongl. W.	Gweebarra, &c.: throughout, locally c.—*Fl. Don.*
36	Tyrone	Strabane glen (Phillips)—Phillips & P. '87 *678*.
37	Armagh	Slieve Gullion (Lett)—P. '93 *701*.
38	Down	Craigauntlet '90—P. Frequent in the Mournes.
39	Antrim	Glenariff '90—P. Rare—*Fl. NE.*
40	L'derry	Dungiven '72—B.N.F.C. *117*. Very rare—*Fl. NE.*

Osmunda regalis L. Royal Fern.

Census 38+(1)—East 15, Centre 11+(1), West 12.

1	Kerry S.	Kenmare '98—P. Frequent—Scully.
2	Kerry N.	Killarney '00: frequent—Scully.
3	Cork W.	Dunmanway '00: common—Phillips.
4	Cork Mid	Ballinhassig '98: frequent—Phillips.
5	Cork E.	Youghal '00: frequent—Phillips.
6	Waterfd.	Clonea '99—P. Chiefly near the coast, local.
7	Tipp. S.	South-west of Cahir '00—P.
8	Limrck.	Doon '00—P. Althea—Kinahan *463*.
9	Clare	Ennistymon '99—Miss Knowles. Common except in N.
10	Tipp. N.	Lough Ourna '99, Portumna '97—P.
11	Kilkny.	Lough Cullin and Brandon Hill '99—P.
12	Wexford	Ferns '97—D.N.F.C. *306*. Frequent.
13	Carlow	Gowlin '99, St. Mullin's, Polmounty River—P.
14	Queen's	Castletown '99, Portarlington—P. Ballybrittas—*383*.
15	Galw. SE.	Chevy Chase '00—P. Eastern half frequent.
16	Galw. W.	Glen Inagh '98—Colgan. Common.
17	Galw. NE.	Barbersfort '99: throughout, frequent—P.
18	King's	Frankford '00, Clonad wood, Banagher—P.
19	Kildare	Near Thomastown '96—P. Cushaling bog '97—*305*.
20	Wicklow	Annamoe and Lough Dan '94—P. Chiefly in centre, r.
21	Dublin	Howth—*Fl. Howth* '87. Kelly's Glen—Mackay *522*.
22	Meath	Near Ferns Lock '96—P.
23	Westmth.	Robinstown and Quarry bog—Levinge '94 *484*.

24	Longfd.	Derrymacar Lough '00—P.
25	Roscomn.	Corkip Lough '99, Lough Key, &c.: frequent—P.
26	Mayo E.	Claremorris '00—P. Frequent.
27	Mayo W.	Mallaranny '99—Marshall. Very frequent.
28	Sligo	L. Talt '96—Colgan. L. Arrow, L. Gara, '97—P.
29	Leitrim	Leitrim '99, Lough Melvin, and on the coast—P.
31	Louth	Ardee '00—Mrs. Swan. Braganstown bog '00—P.
(32	Monaghn.	‡Dartrey '00—Somerville.)
33	Ferman.	Carrick '00—West. Frequent in the west.
34	Dongl. E.	Rare in the north, common elsewhere—*Fl. Don.*
35	Dongl. W.	Throughout, common—*Fl. Don.*
36	Tyrone	Arboe '97—Miss Knowles. Strabane (Phillips)—*678.*
37	Armagh	S. of Portadown, and frequent on bogs in north, '92—P.
38	Down	Killinchy! '90—J. Wilson. Very rare.
39	Antrim	Near Kilrea '94, Shane's Castle '91—P. Very rare.
40	L'derry	Near Maghera '94—P. Very rare—*Fl. NE.*

Drainage, and in some cases the depredations of dealers, have much reduced this fern in the east, so that it is now extremely rare in 12, 20, 21, 38, 39, 40. Calcifuge, and in the Central Plain confined to the bogs and deep swamps.

Ophioglossum vulgatum L. Adder's-tongue.

Census 35—East 14, Centre 10, West 11.

1	Kerry S.	Roughty River '00: rather rare—Scully.
2	Kerry N.	Killarney '00: rather frequent—Scully.
3	Cork W.	Desert (Longfield), &c.—Allin *Fl.* '83. Rare—Phillips.
4	Cork Mid	Blarney '94: rare—Phillips.
5	Cork E.	Trabolgan '98: rare—Phillips.
7	Tipp. S.	Fethard '99—Phillips. Near Clonmel '97—P.
8	Limrck.	Lough Gur '00—P. Foynes—R. D. O'Brien.
9	Clare	Dromoland '98—W. de V. Kane. Common.
10	Tipp. N.	Dromineer '99—P. Widespread, frequent.
11	Kilkny.	Coppenagh '98—P.
12	Wexford	Rosslare '97—Marshall. Frequent.
13	Carlow	Ballintemple '99—P.
14	Queen's	Mountrath '97—P. Frequent in east half.
15	Galw. SE.	Loughrea '97, Garryland—P. Frequent in east half.
16	Galw. W.	South of Lough Mask '95—M. & S. *545.*
17	Galw. NE.	Near Clonbrock '96—P.
18	King's	Lough Goura '98, Geashill '96—P.

19	Kildare	Kildare '97, Rathmore, Carbury—P.
20	Wicklow	Blessington '98—P. Rare—*Guide* '78.
21	Dublin	Near Lusk '00: frequent—Colgan.
22	Meath	Ballivor '00—P.
23	Westmth.	Knock Eyon '99, Coosan Lough, Athlone—P.
25	Roscomn.	Rockville '99, Mote Park '97—P.
26	Mayo E.	South of Lough Mask '95—M. & S. *545*.
28	Sligo	Lough Arrow '97—P.
29	Leitrim	Annaghearly L. '99—P. Arroo Mtn.'84—B. & V. *112*.
30	Cavan	Mount Nugent '96—P.
31	Louth	Boyne Obelisk '96—P.
32	Monaghn.	Drumreaske '00—Waddell.
34	Dongl. E.	Leenane, near Ballyshannon, &c.: local—*Fl. Don.*
35	Dongl. W.	Horn Head, &c.: north and south, very local—*Fl. Don.*
37	Armagh	Loughgall '92: north only, frequent—P.
38	Down	Clandeboye '00—P. Frequent—*Fl. NE.*
39	Antrim	Ballyclug '99(C. F. D'Arcy)—Miss Knowles. Frequent.
40	L'derry	Kilrea '94—Mrs. Leebody. Frequent—*Fl. NE.*

No doubt occurs in all divisions.

Botrychium Lunaria Swartz. Moonwort.

Census 35—East 14, Centre 10, West 11.

1	Kerry S.	Near Glengariff tunnel '00: rare—Scully.
2	Kerry N.	Barrow Harbour '92: rare—Scully.
3	Cork W.	Castletownsend '97: rare—Phillips.
4	Cork Mid	Currabinny '00 (Scully): rare—Phillips.
5	Cork E.	Dungourney—Allin *Fl.* '83. Rare—Phillips.
6	Waterfd.	Ballyscanlan '75—Miss Horne! Carrickbeg—J. Grubb.
7	Tipp. S.	Above Muskry Lough '00—P. Clonmel—Kinahan *460*.
8	Limrck.	Near Feenagh '00—R. D. O'Brien. Glin—Kinahan *463*.
9	Clare	Dromoland '98—W. de V. Kane. Frequent throughout.
10	Tipp. N.	Keeper range (F. J. Foot)—Kinahan '60 *444*.
11	Kilkny.	Coppenagh '98—P.
12	Wexford	Talbot Hall (Miss Fothergill) '92—B. & M. *MS.*
13	Carlow	Gowlin '99—P. Borris '96 (T. Hartley)—Colgan.
14	Queen's	Mountrath '97, Glendine—P. Borris—Hart *388*.
15	Galw. SE.	Moyode '99—P. Widespread but not common.
16	Galw. W.	Inveran '92—Colgan. Near Galway '95—P.
17	Galw. NE.	Knockmae and Keekill '99, Clonbrock '96—P.
18	King's	Near Portarlington '84—Hart *383*. Doon—Foot *328*.

20	Wicklow	Lough Dan '94—P. Chiefly in the centre, rare.
21	Dublin	Dundrum! '98—Mrs. Tatlow. Not infrequent—Colgan.
22	Meath	Near Laytown '94—B.N.F.C. *117*.
23	Westmth.	Knock Eyon, &c.—Levinge '94 *484*. Centre and W., r.
24	Longfd.	Carn Clonhugh '98—P.
27	Mayo W.	Rathroeen L. '00—P. Near Louisburgh—Kinahan *448*.
28	Sligo	Dromore West '96—Colgan. Frequent in east half.
30	Cavan	Slieve Glah! '96—Miss Kelsall. L. Sheelin '85—P.
31	Louth	Collon (J. White)—Wade 1804 *902*.
32	Monaghn.	Bragan '00—Waddell.
34	Dongl. E.	Leenane, &c.: ? frequent—*Fl. Don.*
35	Dongl. W.	Near Glinsk '98—Hart *405*. North only, f.—*Fl. Don.*
36	Tyrone	Strabane '96—Miss Knowles.
37	Armagh	Navan Fort (Johnson), Ardmore (Lett!)—P. '93 *701*.
38	Down	Saintfield '99—Waddell. Rare—*Fl. NE.*
39	Antrim	Bushfoot '97—Mrs. Swan. Frequent—*Fl. NE.*
40	L'derry	Benbradagh, Stewart: rare—*Fl. NE.*

Equisetum maximum Lamk. Horsetail (genus).

Census 37—East 14, Centre 13, West 10.

Divisions all, *except 11 Kilkenny, 27 Mayo West, 28 Sligo.* A plant of uneven distribution. Rare in 4, 7, 10, 15, 17, 18, 22, 23, 24, 31, 32, 34, 35. Frequent or locally abundant elsewhere. Appears to be a common plant in the north-east only.

Equisetum arvense L.

Divisions all. Common.

Equisetum pratense Ehrh.

34	Dongl. E.	Culdaff, G. Dickie—*Fl. Ulst.* '64.
35	Dongl. W.	Mount Charles, and between Dunfanaghy and Gweedore, G. Dickie—*Fl. Ulst.* '64.
39	Antrim	Crow Glen '97—B.N.F.C. *117*. Rather rare—*Fl. NE.*

North only, local and rare.

Equisetum sylvaticum L.

Census 36—East 12, Centre 12, West 12.

Divisions all, *except 11 Kilkenny, 19 Kildare, 22 Meath, 23 Westmeath.* A local plant, avoiding the limestone, and favouring the uplands. One station only in 6, 7, 13, 17, 26. Much more frequent in Ulster than elsewhere.

Equisetum palustre L.

Divisions all. Very frequent.

Equisetum limosum L.

Divisions all. Common.

Equisetum hyemale L. Dutch Rush.

Census 16—East 9, Centre 4, West 3.

2	Kerry N.	Killarney '94: very local—Scully.
4	Cork Mid	Ballincollig (Alexander), Ovens—Power *Fl.* '45.
12	Wexford	Courtown '94—P. Near Enniscorthy '81—Hart *371*.
13	Carlow	Aghade and Goresbridge '99, St. Mullin's '98—P.
14	Queen's	Mountrath '97, Grantstown—P. Abbeyleix; Dunmore.
15	Galw. SE.	Dalystown '98—P.
18	King's	Kinnitty '97, Clonad wood '96—P.
19	Kildare	Celbridge Abbey '97—P. Leixlip Castle—Babington '52.
20	Wicklow	Enniskerry '00—P. Bray River valley f., Slaney v.r.
21	Dublin	By Liffey below Lucan '93: very rare—Colgan.
33	Ferman.	Colebrooke River (T. O. Smith)—More '72 *614*.
35	Dongl. W.	River Eske—*Fl. Don.*
36	Tyrone	Victoria Bridge '00—Miss Knowles!
38	Down	Lagan below Edenderry '92—P. Mournes frequent.
39	Antrim	Glenariff '92—P. Rare—*Fl. NE.*
40	L'derry	Magilligan '97—Mrs. Leebody. Rare—*Fl. NE.*

Equisetum Moorei Newm.

12	Wexford	Coast occasionally as far south as Raven Point '81—Hart *371*.
20	Wicklow	Three Castle Head '92, Scully—B.E.C. '92. Coast from Wicklow to Arklow.

Equisetum trachyodon Braun.

Census 8—East 3, Centre 0, West 5.

1	Kerry S.	By the River Laune '89—Scully.
4	Cork Mid	St. Anne's woods '00—G. Pim!
15	Galw. SE.	Dalystown '97—P. Chevy Chase '73—Hart *364*.
27	Mayo W.	Lough Cullin, More—B.E.C. '64.
28	Sligo	Near Glencar Lake '84—B. & V. *112*.
34	Dongl. E.	Bundrowes River and south of Pettigoe—*Fl. Don.*
39	Antrim	Colin glen! '93—Stewart. Very rare—*Fl. NE.*
40	L'derry	Ballyharrigan glen '92—Mrs. Leebody.

Equisetum variegatum Schleich.

Census 15—East 4, Centre 4, West 7.

2	Kerry N.	Killarney '99—Scully. The Paps, Scully—*Cyb.* II.
9	Clare	Inishmore '95—P.
14	Queen's	Maryborough '93—P. Athy; Tinnehinch bridge.
15	Galw. SE.	Castle Taylor '79—Corry *240*.
16	Galw. W.	Lough Bollard—More '72 *614*.
17	Galw. NE.	Lough Corrib south of Keekill '99—P.
18	King's	Glen above Kinnitty '00—P. Tullamore district f.
19	Kildare	Canal at Kilcock and Leixlip '96—P.
21	Dublin	Portmarnock '00 : v. r.—Colgan. Royal Canal; Dodder.
22	Meath	Canal at Enfield '96—P.
23	Westmth.	Coosan L. '98—P. L. Drin—Levinge. Canal frequent.
26	Mayo E.	Lough Carra '37—J. Ball *93*.
28	Sligo	Lough Talt '96—Colgan. Mullaghmore—*Cyb.* I.
29	Leitrim	Glencar '75—Stewart.
40	L'derry	Magilligan, D. Moore—*Cyb.* I.

The prevailing Irish plant is var. *majus* Syme. To this form all the above records are referable except those for Killarney, which represent var. *Wilsoni* Newm., and those for the sandhills of Dublin, Mullaghmore and Magilligan, which are var. *arenarium* Newm. From some of its Central Plain stations var. *majus* has invaded the Royal Canal, and now fringes it abundantly for miles, in Dublin and Kildare especially.

Lycopodium Selago L. Club-moss (genus).

Divisions all, *except 8 Limerick*. Frequent on mountains, and on bogs in the plain.

Lycopodium inundatum L.

2	Kerry N.	Lough Guitane '96—Scully.
3	Cork W.	Dunmanway '73 (Allin)—*Hb.* Queen's Coll. Cork. V. r.
16	Galw. W.	W. of Maam '95—M. & S. *545*. Letterfrack—Moore *573*.

Lycopodium clavatum L.

Census 24—East 11, Centre 6, West 7.

2	Kerry N.	Mangerton '94 : rare and local—Scully.
3	Cork W.	Mount Leader near Millstreet '00—Phillips.
4	Cork Mid	Rochestown (Alexander), Willsville—Power *Fl.* '45.
5	Cork E.	Templemichael glen '59 (T. Wright), *Hb.* Queen's Coll. Cork—Phillips. Dunbulloge glen—*Cyb.* II.

6	Waterfd.	Near Clonmel—Miss S. Grubb '00.
10	Tipp. S.	Kilduff Mountain '82—Hart *385*.
11	Kilkny.	Brandon Hill (Miss Burtchaell)—T. Hartley '00.
13	Carlow	Mount Leinster (R. C. Browne)—More '72 *614*.
16	Galw. W.	Killaguile, Miss Jackson—*Cyb.* II.
18	King's	Slieve Bloom above Cadamstown '00—P.
20	Wicklow	Lugnaquilla '97—Colgan. Centre, local.
21	Dublin	Glenasmole '00 : rare—Colgan.
24	Longfd.	Carn Clonhugh '98—P.
25	Roscomn.	Common [?] on the Curlew Mountains—Foot '66 *329*.
27	Mayo W.	Bengorm '82—Hart *380*.
28	Sligo	Lough Talt '96—Colgan.
30	Cavan	Slieve Glah '96—P.
34	Dongl. E.	Slieve Snacht '98—Hart *405*. Rare—*Fl. Don.*
35	Dongl. W.	Ardara, &c.: rare—*Fl. Don.*
36	Tyrone	Co. Tyrone—*Cyb.* I.
37	Armagh	Brackagh bog south of Portadown '93—Lett!
38	Down	Slieve Donard ['89]—S. & P. *873*. Mournes, very rare.
39	Antrim	Glenshesk! '97—Miss Hopkins. Rare—*Fl. NE.*
40	L'derry	Crockbrack '92—P. Rare—*Fl. NE.*

Lycopodium alpinum L.

Census 12—East 4, Centre 1, West 7.

1	Kerry S.	Carrantual, More—*Cyb.* II.
2	Kerry N.	Mangerton—*Fl. Hib.* '36.
16	Galw.W.	Near Maumeen '82—Hart *380*. Very rare.
20	Wicklow	Cliffs over Lough Ouler '94—P. Centre, local.
27	MayoW.	Sheffry '99—Colgan *221*. Higher mountains, local.
28	Sligo	Mountains of Sligo, J. Wynne—*Cyb.* I.
34	Dongl. E.	Slieve Main and Slieve Snacht '98—Hart *405*.
35	Dongl.W.	Aghla Mountain, &c.: throughout, rare—*Fl. Don.*
36	Tyrone	Aghla, Admiral Jones—*Cyb.* I.
38	Down	Slieve Bearnagh '92—P. Mournes frequent.
39	Antrim	Little Trosk '92—P. Rare—*Fl. NE.*
40	L'derry	Dart and Slieve Gallion, D. Moore—*Cyb.* I.

Selaginella selaginoides Gray.

Census 32—East 12, Centre 10, West 10.

3	Cork W.	Knocknaveigh '98—W. H. Shaw and Phillips.
9	Clare	Carn Seefin '95—P. Frequent in Burren.

10	Tipp. N.	Dromineer '00—Phillips. Frequent in the north-west.
11	Kilkny.	Urlingford '98—P.
12	Wexford	Near Wexford '96—Marshall.
13	Carlow	Milford '98—P.
14	Queen's	Dunmore '98, Emo—P. Tinnehinch bridge—Hart *383*.
15	Galw. SE.	Lough Cooter '00—P. Castle Taylor; Lough Derg.
16	Galw. W.	Muckanaght '98—Colgan. Frequent.
17	Galw. NE.	Barbersfort '99: frequent—P.
18	King's	Shannon Harbour '98—P.
19	Kildare	Kildare '97—P.
20	Wicklow	Glencree, &c.—*Guide* '78.
21	Dublin	Portrane sandhills '00: frequent—Colgan.
22	Meath	Laytown sandhills '96—P.
23	Westmth.	Mullingar '97—Carr. Frequent in the centre.
24	Longfd.	Saint's Island in Lough Ree '00—P.
25	Roscomn.	Near Athlone '98—P.
26	Mayo E.	Claremorris, Callow, '00—P. Clonbur; L. Carra.
27	Mayo W.	Mallaranny '99—Marshall. Frequent.
28	Sligo	Lough Talt '96—Colgan. East half frequent.
29	Leitrim	Glenade '99—P.
30	Cavan	Lough Oughter '96—P.
31	Louth	Ballymascanlan and Carlingford Mountain '00—P.
32	Monaghan	Creeve Lough '00—P.
33	Ferman.	Knockninny '00—Tetley! Local.
34	Dongl. E.	Throughout common—*Fl. Don.*
35	Dongl. W.	Throughout common—*Fl. Don.*
37	Armagh	Camlough Mountain '92—P.
38	Down	Mournes frequent '89-90—S. & P. *873*. Rare elsewhere.
39	Antrim	Glenariff '89—P. Frequent—*Fl. NE.*
40	L'derry	Magilligan sandhills '94—P. Frequent—*Fl. NE.*

Almost unknown in Munster; elsewhere widespread but not common. In the Central Plain is of frequent occurrence on damp, gravelly ground.

Isoetes lacustris L. Quillwort.

Census 17—East 6, Centre 3, West 8.

1	Kerry S.	Glencar '99: frequent—Scully.
2	Kerry N.	Killarney '99: frequent in the south—Scully.
3	Cork W.	Inchigeela '97, Adrigole '94: rare—Phillips.
6	Waterfd.	Ballyscanlan L. '99—P. Coumduala L.—Hart *381*.
16	Galw. W.	Glendalough '95—P. Rare.

20	Wicklow	Lough Dan, L. Ouler, '94—P. Centre and north, f.
25	Roscomn.	Kilmore Bay on Lough Ree '85-6—B. & V. *113*.
27	Mayo W.	Newport '99—Marshall. Rare.
29	Leitrim	South end of Lough Allen '84—Stewart *859*.
32	Monaghn.	Castleblayney Lake, Whitla—*Fl. Ulst.* '64.
34	Dongl. E.	Meendoran '98—Hart *405*. Throughout—*Fl. Don.*
35	Dongl. W.	Magherawarden '98—Hart *405*. Frequent—*Fl. Don.*
36	Tyrone	Co. Tyrone—*Cyb.* I.
37	Armagh	Cashel Lough, &c.: south half, rare, '92—P.
38	Down	Blue Lough '92—P. South half, rare.
39	Antrim	Lough Neagh '99—Davies *269*. Widespread, rare.
40	L'derry	Lough Beg and Enagh Lough, D. Moore—*Cyb.* I.

Frequently descending into the lowland region.

Isoetes echinospora Durr.

1	Kerry S.	Caragh Lake '90: rather rare—Scully.
2	Kerry N.	Killarney '99: rare and local—Scully.
16	Galw. W.	Inishbofin '75—More *616*.
27	Mayo W.	Newport '99—Marshall.

Has probably a wider distribution than this.

Pilularia globulifera L. Pillwort.

Census 5—East 2, Centre 1, West 2.

1	Kerry S.	Killarney '89—Scully.
16	Galw. W.	Glendalough '95—P. L. Mask—*545*. Kylemore.
36	Tyrone	Lough Neagh near Washing Bay '96—Miss Knowles.
39	Antrim	Selshan, Portmore, D. Moore—*Fl. Ulst.* '64 and *874*.
40	L'derry	R. Bann at Coleraine, D. Moore—*Fl. Hib.* '36.

Chara fragilis Desv. Stonewort (genus).

Divisions all, *except 40 Derry*, in which it no doubt occurs. Common in one or other of its forms.

Chara connivens Braun.

12	Wexford	Lagoon north of Wexford Harbour '97—Marshall.

Chara aspera Willd.

Census 31—East 12, Centre 8, West 11.

1	Kerry S.	Castlegregory '94: rare—Scully.
2	Kerry N.	Killarney '96: local—Scully.

3	Cork W.	Skibbereen '96 : frequent—Phillips.
4	Cork Mid	Near Monkstown '98 : frequent—Phillips.
5	Cork E.	Youghal '00 : frequent—Phillips.
9	Clare	Inishmore '90—Nowers & Wells *651*.
11	Kilkny.	Kilkenny '00—Phillips.
12	Wexford	Ardamine '97, near Wexford '96—Marshall *539*, *537*.
14	Queen's	Portarlington '96—P. Frequent.
15	Galw. SE.	Kilcolgan '99—P. Frequent on Lough Derg.
16	Galw. W.	Barna '00—Phillips. Chiefly in the east, frequent.
17	Galw. NE.	Terryland River '99—P.
18	King's	Canals at Edenderry and near Kilbeggan '96—P.
19	Kildare	Maynooth '96, Kilcock, Monasterevan, all in canal—P.
20	Wicklow	Murrough (D. Moore)—Groves '95 *349*.
21	Dublin	Royal Canal at Lucan '94—P. ? Frequent.
22	Meath	Oldcastle, and canal at Enfield, '96—P.
23	Westmth.	Canal at Mullingar '99—P. Central lakes frequent.
24	Longfd.	Longford '98 : common throughout Royal Canal—P.
26	Mayo E.	Lough Corrib near Cong '95—M. & S. *545*. Lough Cullin (More)—Groves *339*.
27	Mayo W.	Newport '99—Marshall. Frequent.
28	Sligo	L. Arrow '97—P. L. Gill River '84—B. & V. *112*.
29	Leitrim	Lough Melvin '99—P. Glenade '84—B. & V *112*.
30	Cavan	Belturbet (D. Moore)—Groves '95 *349*.
33	Ferman.	Enniskillen '83, Carrick L. '81 (Stewart)—*342*, *854*.
35	Dongl. W.	Gortnaglar Lough '98—Hart *405*.
36	Tyrone	Arboe '91—S. A. Brenan !
37	Armagh	Navan Fort and common in Lough Neagh '92—P.
38	Down	Money Lake '91—P. Rare—*Fl. NE.*
39	Antrim	L. Neagh '94 (Stewart)—Groves *350*. Rare—*Fl. NE.*
40	L'derry	Lough Beg and River Bann below Coleraine '94—P.

Chara aspera subsp. *desmacantha* H. & J. Groves.

Census 21—East 4, Centre 11, West 6.

7	Tipp. S.	Farranaleen '98—P.
8	Limrck.	Lough Gur '00—P.
10	Tipp. N.	Dromineer '00 (Phillips)—Groves. Youghal Bay—P.
11	Kilkny.	Johnstown '98—P.
14	Queen's	Canal at Portarlington '96—P.
15	Galw. SE.	Marble Hill '97—P. L. Derg '91 (B. King)—Groves.
16	Galw. W.	Oughterard '85 (E. F. Linton)—Groves.

17	Galw. NE.	L. Corrib below Keekill '99—P. Ballindooly—Groves.
18	King's	Pallas Lough '00, Kilbeggan, Edenderry—P.
19	Kildare	Kilcock and Maynooth '96—P.
21	Dublin	Canal at Blanchardstown '89 (Scully)—Groves *355*.
23	Westmth.	Mullingar '99—P. L. Owel, L. Ennel, Brittas L.
24	Longfd.	Canal at Ballymahon '00 and Killashee '98—P.
25	Roscomn.	Lough Ree above Athlone '98 and at Galey '97—P.
26	Mayo E.	Claremorris, Foxford, '00—P. Cong—Marshall.
27	Mayo W.	Rathroeen Lough '00—P. Ballina (Somerville)—Groves.
28	Sligo	Ballysadare '00, Lough Arrow '97—P.
29	Leitrim	Lough Melvin '99—P.
30	Cavan	Oldcastle '96—P.
33	Ferman.	Lough Melvin at Garrison '00—P.
38	Down	Tullyratty '99 (Davies)—Groves. Money Lake '91—P.

Chara polyacantha Braun.

Census 22—East 8, Centre 9, West 5.

5	Cork E.	Shanagarry bog (Carroll)—Groves '80 *339*.
7	Tipp. S.	Between Cashel and Fethard '98—P.
8	Limrck.	Lough Gur, Curragh Chase, Mullagh, '00—P.
10	Tipp. N.	Lough Ourna '99: frequent throughout—P.
11	Kilkny.	Johnstown '98—P.
13	Carlow	Milford '98—P.
14	Queen's	Maryborough '96: widespread and frequent—P.
15	Galw. SE.	Loughrea and Marble Hill '97, and frequent in SE.—P.
16	Galw. W.	Moycullen '99—P.
17	Galw. NE.	Barbersfort, Keekill, '99—P. Headford—Groves *339*.
18	King's	Pallas Lough '00, L. Ourna, Shannon Harbour—P.
19	Kildare	South of Kildare '97, and frequent in Grand Canal—P.
20	Wicklow	Near Newcastle '92—Groves *350*.
21	Dublin	Royal Canal at Lucan '94—P.
22	Meath	Lough Crew '96—P.
23	Westmth.	Canal near Mullingar '99—P. Centre & west common.
25	Roscomn.	Corkip Lough '99, Athlone '98—P.
26	Mayo E.	Foxford (More)—Groves '80 *339*.
27	Mayo W.	West of Castlebar '99—Marshall.
28	Sligo	Ballysadare '00—P.
32	Monaghn.	Drumreaske '00—Waddell.
37	Armagh	Loughgall '92—P.

A strongly calcicole plant, of common occurrence in the Central Plain.

Chara contraria Kuetz.

Census 22—East 7, Centre 8, West 7.

1	Kerry S.	Near Rossbehy '88—Scully.
10	Tipp. N.	Dromineer '00—Phillips. Thurles '98—P.
13	Carlow	Goresbridge '99, Milford '98—P.
14	Queen's	Rathdowney '98, Mountmellick, Monasterevan—P.
15	Galw. SE.	Lough Derg near Woodford '98—P. F. in L. Derg.
16	Galw. W.	Cong '85 (C. Bailey)—Groves *345*.
17	Galw. NE.	River Suck at Bellagill bridge '96—P.
18	King's	Canal at Shannon Harbour '98, and at Edenderry—P.
19	Kildare	Kilmeage '98, Monasterevan, Kilcock, all in canal—P.
21	Dublin	Canal at Lucan '94—P.; and at Glasnevin—*343*.
22	Meath	Near Oldcastle '96—P.
23	Westmth.	L. Owel '95 (Levinge)—Groves *355*. Central lakes c.
24	Longfd.	Canal north of Ballymahon '00—P.
25	Roscomn.	River Suck at Bellagill bridge '96—P.
26	Mayo E.	Cong '85 (C. Bailey)—Groves *345*.
27	Mayo W.	Ballina '00—P.
29	Leitrim	Lough Allen '84—Stewart *859*.
30	Cavan	Lough Sheelin '96—P.
35	Dongl. W.	Gortnaglar Lough '98—Hart *405*. Not rare.
37	Armagh	Lough Neagh '80—H. W. Lett!
38	Down	Clandeboye Lake '91—P.
40	L'derry	Limavady Junction '89—W. D. Donnan and P.

Chara denudata Braun.

23	Westmth.	Brittas Lake '94—Levinge *485*.

Chara tomentosa L.

Census 5—East 0, Centre 4, West 1.

10	Tipp. N.	Lough Derg below Portumna '98—P.
15	Galw. SE.	Lough Derg near Woodford '98—P.; and near Portumna (D. Moore)—Groves *339*.
23	Westmth.	Coosan Lough '98—P. Central lakes c., Lough Ree f.
24	Longfd.	Elfeet Bay on Lough Ree '00—P.
25	Roscomn.	Athlone '98—P. Rindown castle—B. & V. *113*. Lough Ree only.

Confined to the Westmeath lakes and the expansions of the Shannon; all lie within the Shannon drainage area.

Chara hispida L.

Census 31—East 12, Centre 10, West 9.

1	Kerry S.	Castlegregory '94 : rare—Scully.
2	Kerry N.	Killarney '96 : local—Scully.
4	Cork Mid	Summerstown bog (Alexander)—Power *Fl.* '45. Rare.
5	Cork E.	Ballynoe bog and Midleton—Power *Fl.* '45.
7	Tipp. S.	Farranaleen '98, Clonmel, and near Cashel—P.
8	Limrck.	Lough Gur '00—P. Common in the north.
9	Clare	Newmarket '85–6—Stewart *863*.
10	Tipp. N.	Lough Ourna '99 : frequent throughout—P.
11	Kilkny.	Ballyragget '99, Urlingford '98—P.
13	Carlow	Goresbridge '99, Carlow '98—P.
14	Queen's	Near Maryborough '93 : common in east half—P.
15	Galw. SE.	Loughrea '98—P. Common in Lough Derg.
16	Galw. W.	Moycullen '99—P. Clonbur—Marshall. Roundstone.
17	Galw. NE.	Barbersfort '99 : frequent—P.
18	King's	Pallas Lough '00, Edenderry, Shannon Harbour—P.
19	Kildare	Rathangan '98—P. Common in the canals.
20	Wicklow	Murrough '77 (D. McArdle)—Groves *349*.
21	Dublin	Canal at Lucan '94, Raheny '93 : ? rare—P.
22	Meath	Lough Crew and canal near Enfield '96—P.
23	Westmth.	Lough Iron '99—P. Common.
24	Longfd.	Longford '98 : f. in Lough Ree and Royal Canal—P.
25	Roscomn.	Corkip Lough '99—P. R. Suck and L. Ree common.
26	Mayo E.	Claremorris '00—P. S. end of L. Mask—M. & S. *545*.
27	Mayo W.	Lough Conn and Ballina '00—P.
28	Sligo	Ballysadare '00—P. Frequent in east half.
30	Cavan	Lough Sheelin '96—P.
31	Louth	Greenore '00—P. Frequent throughout.
35	Dongl. W.	Gortnaglar Lough '98—Hart *405*.
37	Armagh	About Armagh and Loughgall '92—P.
38	Down	Money Lake '91—P. Rare—*Fl. NE.*
40	L'derry	Magilligan '92—Mrs. Leebody. Rare—*Fl. NE.*

Chara vulgaris L.

Census 36—East 14, Centre 11, West 11.

Divisions all, *except 6 Waterford, 32 Monaghan, 34 Donegal East, 36 Tyrone.* No doubt universal.

Chara canescens Loisel.

1 Kerry S. Castlegregory '94—Scully *834*.
12 Wexford Lagoon north of Wexford Harbour '97—Marshall.
17 Galw. NE. By the shore east of Galway '00—Phillips.

Tolypella glomerata Leonh.

Census 11—East 3, Centre 5, West 3.

8 Limrck. Limerick '99—Somerville.
10 Tipp. N. Slevoir Point on Lough Derg '96—Colgan.
12 Wexford Lagoon north of Wexford Harbour '97—Marshall.
15 Galw. SE. Rinmaher Point on Lough Derg '96—Colgan.
18 King's Canal at Shannon Harbour '98—P.
19 Kildare Canal at Rathangan and Kilmeage '98; ponds at Carton '92—P.
21 Dublin Royal Canal at Glasnevin '95—P. Grand Canal near Dublin '90, Scully—*Cyb.* II.
23 Westmth. Lough Deravaragh and Lough Ennel '93—Groves *348*.
28 Sligo Glencar Lake '84 (Barrington)—Groves *343*.
29 Leitrim Lough Melvin '99—P. Glenade Lake—B. & V. *112*.
33 Ferman. Lough Erne at Belleek '00—P.

Tolypella prolifera Leonh.

21 Dublin Royal Canal near Glasnevin (D. Moore)—Groves '80 *339*.

Not gathered since it was first discovered.

Tolypella intricata Leonh.

21 Dublin Royal Canal near Glasnevin '96, F. W. Moore and D. McArdle—*Cyb.* II.

Nitella Nordstedtiana H. & J. Groves.

1 Kerry S. Caragh Lake '99—Scully.
2 Kerry N. Killarney '99—Scully.

Nitella tenuissima Kuetz.

17 Galw. NE. Ballindooly '93—H. & J. Groves *348*.
23 Westmth. Scraw bog near Lough Owel '93, Levinge—B.E.C. '93.

Nitella gracilis Agardh.

20 Wicklow Luggela and Lough Dan '92 (Barrington & Groves)—Groves *350*.

Nitella translucens Agardh.

Census 11—East 6, Centre 0, West 5.

1	Kerry S.	Glencar '99 : frequent—Scully.
2	Kerry N.	Killarney '99 : very local—Scully.
3	Cork W.	Inchigeela '97 : frequent in the south—Phillips.
4	Cork Mid	Vernonmount (Harvey)—Power *Fl.* '45.
5	Cork E.	Mayfield '96—Phillips. Rathcooney—Power *Fl.*
16	Galw. W.	L. Cregduff '85—Linton *502*. Clifden (More)—*339*.
27	Mayo W.	Newport '99—Marshall.
37	Armagh	Cashel Lough '92—P.
38	Down	Lake at Clandeboye '00—P. Rare—*Fl. NE.*
39	Antrim	Rathlin Island '82—Stewart. Rare—*Fl. NE.*
40	L'derry	Killelagh Lough near Maghera '94—P. Rare—*Fl. NE.*

Very local, and absent from the whole Central Plain.

Nitella flexilis Agardh.

Census 10+(2)—East 1+(2), Centre 5, West 4.

1	Kerry S.	Glencar '99 : rather rare—Scully.
2	Kerry N.	Killarney '99 : local—Scully.
3	Cork W.	Inchigeela, Gougane Barra, '97—Phillips. Glengariff.
(4	Cork Mid	Ducloyne bog—Power *Fl.* '45. Ballyphehane—*287*.)
(5	Cork E.	Riverstown (D. Murray)—Power *Fl.* '45.)
24	Longfd.	Lough Gowna '00—P.
25	Roscomn.	Lough Allen at Arigna '00—P.
26	Mayo E.	Cong '85—Linton *502*.
29	Leitrim	Lough Allen '84—Stewart *859*.
32	Monaghn.	Annaghmakerig Lough '00—P.
33	Ferman.	Rossford Point '37 (W. Thompson)—Groves *343*.
37	Armagh	Near Camlough '92—P.

Confirmation of the Cork Mid and Cork East records is required.

Nitella opaca Agardh.

Census 30—East 11, Centre 9, West 10.

1	Kerry S.	Kenmare '99 : frequent—Scully.
2	Kerry N.	Near Killarney '94 : frequent—Scully.
3	Cork W.	Inchigeela '97, near Skibbereen '96—Phillips.
5	Cork E.	Fermoy (Chandlee)—Groves '95 *349*.
6	Waterfd.	Dungarvan '82 (G. Nicholson)—Groves *349*.
7	Tipp. S.	Ballinure '98—P.

8	Limrck.	Blue Lough '85–6—Stewart *863*.
13	Carlow	Slaney at Tullow '99, Barrow at Bagenalstown '97—P.
15	Galw. SE.	Chevy Chase '00—P.
16	Galw. W.	Mouth of Maam R. '95—M. & S. *545*. Kylemore—*349*.
17	Galw. NE.	Clonbrock '96—P.
18	King's	Tullamore River below Geashill '96—P.
19	Kildare	Canal at Levitstown lock '99—P.
20	Wicklow	Kilmacurragh '84 (F. W. Moore)—Groves '95 *349*.
21	Dublin	Howth '94—P.
22	Meath	Oldcastle '96—P.
23	Westmth.	Lough Deravaragh and Brittas L.—Levinge '94 *484*.
25	Roscomn.	Mount Talbot '97—P. L. Allen c., '84—Stewart *859*.
26	Mayo E.	Kilmovee '99—P. Cong '95—M. & S. *545*.
27	Mayo W.	Newport, and west of Castlebar, '99—Marshall.
29	Leitrim	L. Melvin '99—P. L. Allen—Stewart *859*. L. Bofin.
30	Cavan	Near Cavan '96—P.
32	Monaghn.	Rockcorry '00—P.
33	Ferman.	Lower L. Macnean '00—P. Lough Erne frequent.
34	Dongl. E.	L. Namin '92—Mrs. Leebody. Ballyshannon; Pettigoe.
35	Dongl. W.	Ards—*Fl. Don.*
37	Armagh	Lough Neagh c., Markethill, Loughgall, '92—P.
38	Down	Money Lake '91—P. Frequent—*Fl. NE.*
39	Antrim	Whitehead '90—P. Frequent—*Fl. NE.*
40	L'derry.	Killelagh Lough near Maghera '94—P. Frequent.

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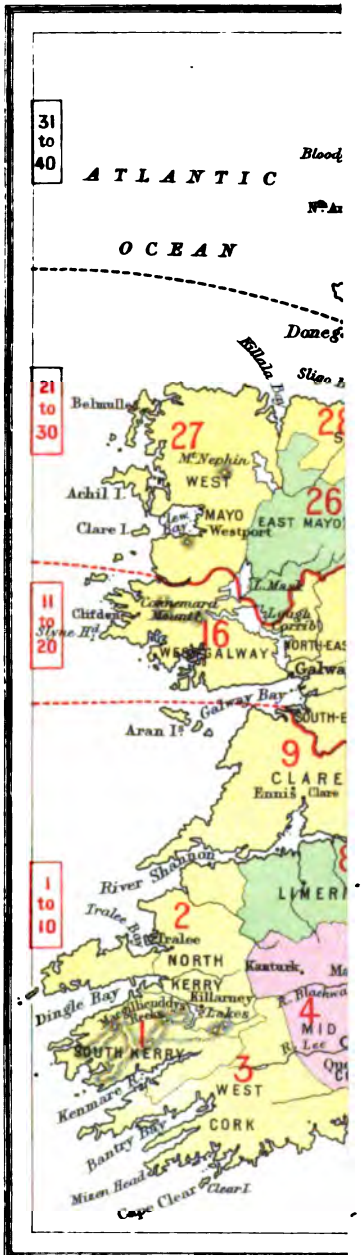

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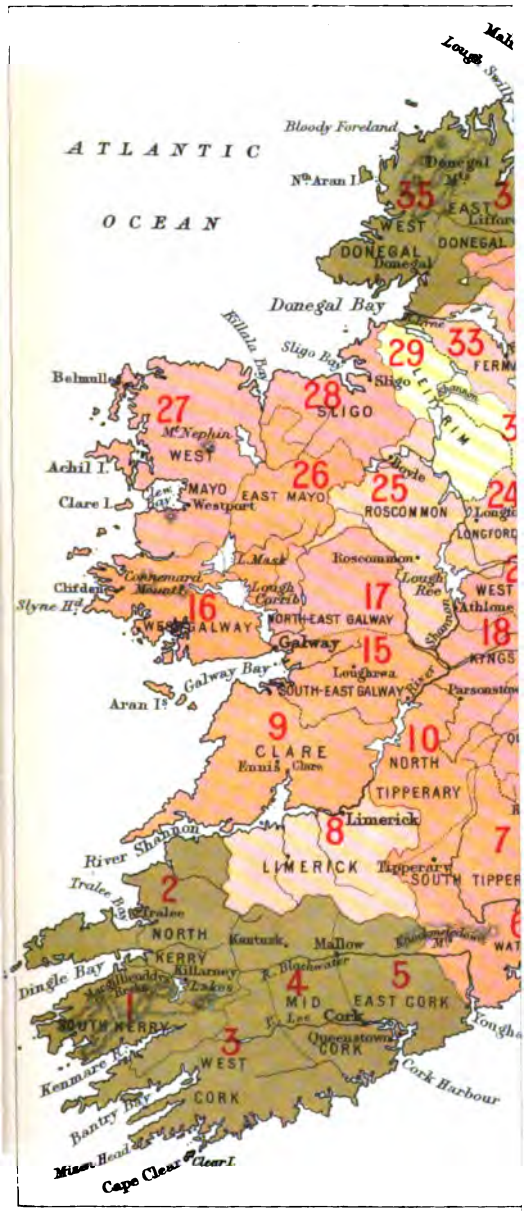

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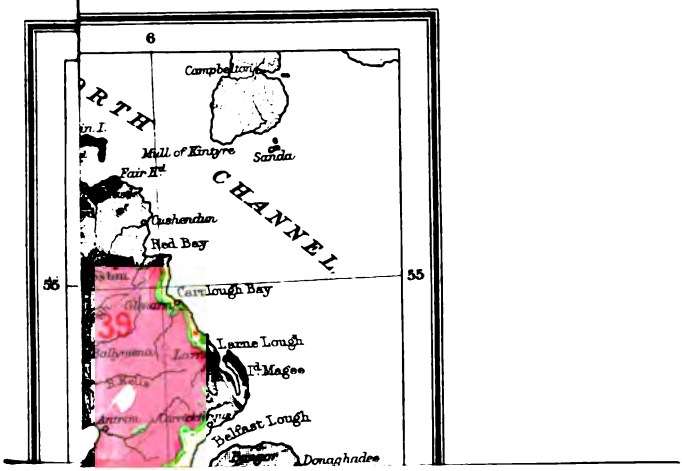

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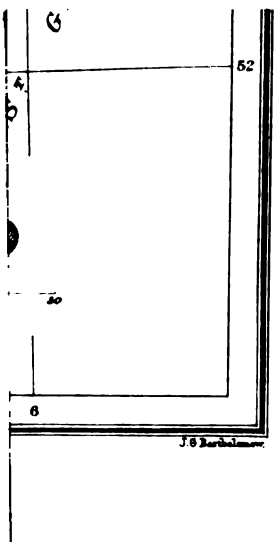
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J.S. Barkelmew

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Dublin: Printed at the University Press, by PONSONBY & WELDRICK,
Printers to the Academy.

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